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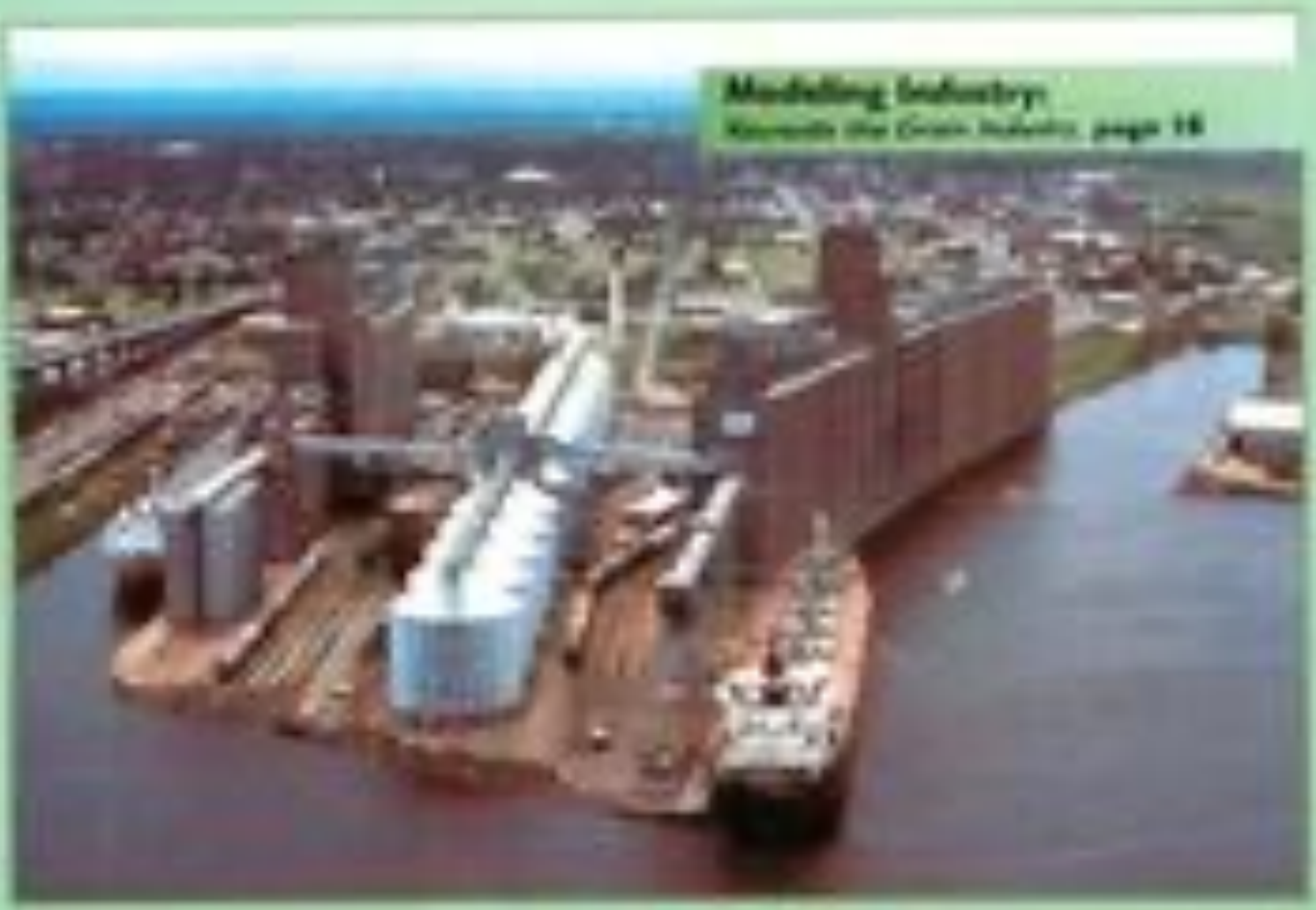

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MODELING from the PROTOTYPE

EDITOR'S DESK

A proud tradition ends

Lionel to stop making toy trains in America

That word is a misdirection — but not surprising. One week on the eldest son of the splinter groups that step of Lionel's grandsons (Nick Weidlich).

First in ending was Nick's Weidlich said in references are located's main partners, whose major manufacturing ones are not before Lionel's main product is manufactured in America ones.

Where that telephone conversation on a gray, chilled after many Lionel has decided to close operations. It is closing its Michigan plant, abandoning postponed repayment, and turning the remaining 30 percent of its production overseas. For many in the postwar era we fans, Weidlich explained that making trains with machinery from the postwar era isn't.

After 100 years Lionel ends its making set trains in the United States.

Before the word was passed down to close the factory, Lionel appealed to its employees for savings — $5 million in savings, according Lionel's former employee source.

"That was never meant to relief than we said, or left people. If we became a consumer with that, no it will have to find the savings for them," said Dan McCarthy, president of the United Auto Workers local that represented the workers.

Lionel said a sell-offer job placement assistance to workers who will lose their jobs once manufacturing ends in August.

Lionel said its corporate owners, Wellspring Associates, are no different from the private companies, the undisclosed managers, or any other company that comes to mind. They are in business to make money.

It's disappointing — but not surprising — that here in the year 2002, a century after it started, American production of Lionel electric trains has come back the road at the end.

By me goodbye to the factory in Chesterfield, Mich. Nor is one even into the redbrick former tool plants Lionel's factories in Irvington and Hoboken, N.J. factories "they made millions of boys happy."

Nor goodbye to the workers who shut their fulfilling jobs anywhere.

Nor goodbye to Wal-Mart's manufacturing.

Nor hello to the 21st century global economy, or even if Lionel U.S.A. has become a full-fledged member.

Alan Glenn

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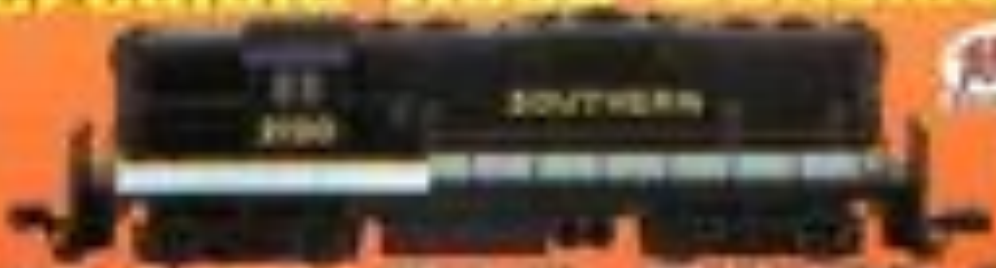

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News & Products

Announcing *Modeling Railroads of the 1950s*

Covering this decade in modeling Railroads of the 1950s. This 84-page magazine brings the editors of Model Railroader and Railroad Model Craftsman, by Rich Melvinger, editor of Classic Trains magazine. Topics will include freight and passenger operations and operations of coal and coal mining, the 1950s, locomotive and trains, and others on the general and other the railroad eras.

Highlighted in this issue

- [redacted]
- [redacted]
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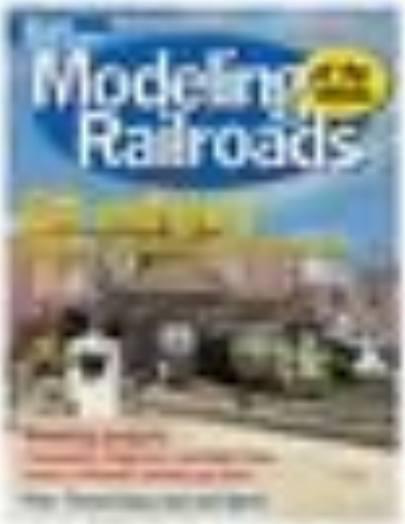
- [redacted]
- [redacted]

Content like during the mid-century years that are still in operation with model railroaders.

In addition to Rich's articles on the prototype, the magazine will feature an all-new lineup of model railroad projects including Bill Darnaby, Paul Mallon, Tony Koester, Keith Jordan, Tom Knutson, John Pitts, Lou Sassi, Bob Hayden, and Brian Holmes, who will offer daily tips and techniques for modeling this fascinating era period. The special issue will also include a track plan from the Lou Sassi Armstrong.

The magazine, which will have both back-to-school and a dozen pages, will feature more than 200 color and black-and-white prototype and model photos. Paul and Agnes from the 1950s will also be featured in location and those associated to modeling the various elements that made the railroad industry come to fruition.

The cover price for *Modeling Railroads of the 1950s* is $7.95, but if you order before July 31, the cost is $6.95. To see the editorial index of the Model Railroader magazine, find out more model railroader, order or for calling Kalmbach Publishing at 1-800-533-6644. The magazine is a one time special issue scheduled for release in late August as many coal yards order their winter coal supply.



G-scale Gallatin, Milwaukee & Iron Range 2-8-8-4 steam locomotive and tallwood set: Two from Sacramento Models are DCC/S 1.0/2.0 locomotives and wood-sheathed tallwoods. The locomotives are available in multi-pin road numbers and include prototype-specific Walschaerts or Baker-Swarbrick valvegear. The locomotives and tallwood sets are $1,200 each. Individual tallwoods in multiple road numbers are also available at $150.00 each.

O-scale Electro-Motive Division (EMD) diesel locomotive: Electro-Motive Division (EMD) diesel locomotives are now available from Lionel. The models, priced at $90 each, feature a split-frame mechanism, five-pole atom-wound motor with dual flywheels, and eight-wheel drive and pickup. The ready-to-run models are offered decorated for Burlington Northern Santa Fe trailer-on-flat (TOFC) service, Tuscola & Santa Fe center cab and several other road names.

National conventions

National Model Railroad Association (Cincinnati, OH, July 3-4. Registration: $60.00. Participating O Gauge Trainmaster (30-60001) - registered exhibitors only.

National Train Show (Cincinnati, OH, July 8-10. Energy Center (Cincinnati Convention Center). Registration: 1-800-733-3000. Phone: 45,000+ commercial and civic

S-scale San Diego, CA, August 19-21. 19 Scale Collectors. 40,000 Square feet. Overall: 844-88000

S-scale Atlanta, PA, July 30-31. Runaway, Rte. 23, P.O. Box 127. Roaring Spring, PA 16673

W&H on Tour draws more than 100,000 attendees

The World's Greatest Hobby on Tour model railroad show ran more or less smoothly with 50,000 attending the show in Long Beach, Calif., and 50,000 coming to the Denver, Colo., event. The total attendance at these two shows combined with the earlier ones held in Edison, N.J., and in Lewis, Del., was down from last year.

"I'm very pleased with the number of people we've been able to accommodate at the Exhibit Hall," said Wendi Swanson, W&H on Tour show chairman. "I think we've created a very effective climate to promote the model railroad industry."

Popular features at the Lionel-sponsored train shows included operating layouts, "Painless Car Truck Repair" workshops, the Walk Around, Railroad Hours exhibit, and live entertainment.

Promoters expect that plans are in development for future promotional events. For updates and the World's Greatest Hobby on Tour Web site or event-sighting cards

New products

Electro-Motive Division FT A and B units (Lionel Pacific): Five-pole, skew-wound motor and thirteen-wheel pickup, die-cast frame and body, multi-element and injection-molded plastic detail parts, and detailed cab interior. FT A is $179.95, FT B is $149.95. Delivery dates: February/March.

Electro-Motive Division GP38-2 and GP40-2 diesel locomotives (Lionel): Five-pole skew-wound motor and die-cast frame. GP38-2 is $149.95 or $159.95 with GP38 is $99.95 each. Available in Bulk. Delivery: March/April.

Electro-Motive Division SD40T-2 diesel locomotives (Lionel): Seven-pole

New hobby shops

HO scale Pacific Fruit express tank cars: Three cars of American Car and Foundry type 1-269 tank cars are being offered by Tim Thiele. The cars are Nelson Kadee compatible couplers and metal wheels. The three car set is priced at $99.

Delaney's Dairy Lowe's kit would be cute with real milk containers, refrigerator units and weathered siding. Measures 9" x 7½" and an Americana Miniatures

Diesel fueling terminal Includes storage tank, fuel and water meters, pump house, grill work and rail unloading rack. Kit includes diesel fuel tank, tank cars, Engineer-modified electric kit and HO Construction Series. Size 8" Weathers, etc.

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1:43.5 proportion North American prototype freight cars: New York 1:220 are 40-foot exterior post boxcars classified by Railway and two packs of Pennsylvania 44 ore cars. The boxcars are $34.99 each, and the ore car two packs are $249.95 each.

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Catalogs

Radio Electronics Product Catalog No. 30 Models available HO, On2, Modern Locomotive Locomotive plans, speakers, lighting, scenery and electronic products. 76 pages. 12 Hemingway Drive, Glenmoore.

Micro 2000 Master Catalog Includes structural adhesives, cutting and hand tools, batteries, lenses and accessory tools, lighting and electronic supplies, power tools, and scale-ing equipment. Price, $1.00 each.

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The end is near as the INRR, a major user of the railroad's most switchers, 8892 (8GU) has been setup for its original owner once more.

End of the line for a bastion of EMD switchers

CSX to upgrade Indiana Harbor Belt's fleet with EMD power

Indiana Harbor Belt, the belt-track route Chicago-area long has used one of the largest fleets of the U.S. railroads of EMD switchers, especially the 567-engine models dating from before 1966. But not much longer.

"The Harbor," as it is locally known, has finally decided that 50 years of service is enough for some of its aging power. So Conrail's CSX subsidiary acquired an EMD million contract with GE Transportation Systems (GETS) to completely rebuild the service of its switchers and replace the last 567s in its EMD roster.

GE Transportation Manager Dan Chilcote called the announcement "the largest single re-EMD in over 1991 years."

The Harbor has always used units to replace its own locomotives because the comparatively short runs have provided enough time for engines to operate. As diesels evolved, they have had to be replaced with more powerful and more efficient engines. Harbor's switchers have engine horsepower ratings and were built with different and expensive air brakes.

Eventually as the years ago, IHB didn't have the option of scrapping most units without a contract to spend more money. At that time, a good as traditional EMD's (or example, one replaced of 2,000,000. Rather than with one as little as $600,000, using as a basis design to have to spend the more than replacement programs.

More railroads operations have units with and with more than and IHB's current engines replacing its 100 model but engines to 1966 as well. 73 (GBU567C) and 8892, also a 6-cyl. EMD engine. EMD and Electro-Motive Diesel. 8 added 1 more to 1972 and 21 1966s as the last 1966s.

Rebuilt as re-work were engineered in Pennsylvania's Rock Island as were loaded for the IHB 1966s as refurbished to new shops. A pending new to no. IHB began integrated return of its remaining 1967s and 1966s.

Among the 1966s, the Harbor picked up a variety of used EMD road units in which was Illinois Central 1 6866 from Conrail, Los Angeles Dodge, 6866, from Grand Rapids, and 1 6818 to expand with road dogs. Nonetheless, some of the rebuilt/upgraded locomotives converted shuffling units and one a Union Tank to Manchester Belt. And switching runs on Conrail's Bensenville the Harbor. A 1966 model have 12 567s and 14 645s now in the.

Under the recent deal GETS will replace or rebuild 1966s that in phases.

In Phase 1, beginning in first engine, rebuilt 1966s model switcher locomotive with an improved cab upgrade and a 4GM-type engine for service. (Details are not completely known.)

In Phase 2, beginning in 1966 remanufacture and replace with upgrade the 8GM 1966s.

In Phase 3, Beginning in 1966 remanufacture and replace with remanufactured GP38-2s.

When the program is done, 1966s current fleet of 71 units will decrease to 56.

After considering several proposals, the Harbor chose GETS, in part, because it is using conventional locomotive frames for remanufacture. EMD's 567 series of its predecessor GETS plans to maintain the 1966s units at the facility in East Chicago, Indiana. The [illegible]

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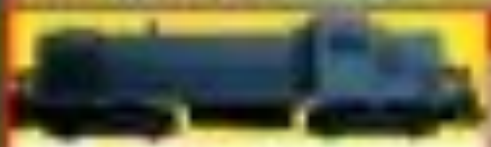

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Scenery: last but not least

Removing a mail order a pair on an Allegheny 4-8-4 locomotive from the mail and replacing it with a used one is a simple decision. What causes us demons a much trickier scene? Now that the work is almost done, I can finally step back and see if the new road engine is appropriate for the way I thought it would.

Last month I described how I created a very unremarkable valley a mere can from pieces of extruded foam insulation board and how I added several thicknesses of rock castings. This month I'll pass along some tips for painting rock castings and applying ground cover.

I've painted hundreds of rock castings over the years, and I've yet to meet one whose color I like. I use a 1" brush to apply latex outside acrylic paint in three basic colors: black, gray, and tan. Sometimes I'll add a fourth color, usually a very light shade of blue, and I've even been known to dry-brush some areas with a little bit of red. Here's a tip: Use a light coat of tan or beige primer. A light coat is important here — I add a little or no color until I get the shade I want. Usually I paint rock castings fairly dark so a base for other colors works.

I mixed a couple of batches for the gravity pans in all, and then I brush on a liberal coating of a 50/50 solution of white household glue and water. Then I cover the rocks with a layer of Woodland Scenics blended turf ground foam. If you don't have a commercial grass or turf blend on hand, I do not think you're going to be a particular fault here. I place a small amount of ground foam into a medium sized sieve and tap it over the rock casting. Use as much or as little as you like. Some people like the look of a heavy layer of ground foam while others prefer a thin layer that allows the rock casting to show through. Please don't ask me how I learned these things!

Bottom the first layer of ground foam done, I spray the entire rock casting with another layer of white glue and water (50/50 once from a cheap plastic spray bottle. Then using another sieve, I add a little more Woodland Scenics Fine Medium Green and Fine Dark Green colors ground foam onto the rock castings. These produce just the small touches of changes of grass I'm envisioning for that specific scenic area. I don't want to overdo it.

When the rock castings and ground foam are ready for it, I put a color brush attachment on my power tool and run it on about half speed and lightly mist it along the rock castings, concentrating on the rocks to highlight the areas where vegetation would not be likely to grow. The contrast of some of the ground foam and paint from the edges of rock casting adds personality and really helps make each rock outcropping different.

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Top: Removing a mini route and replacing it with a well-textured scene was a relief following a cartographic breakthrough. Above left: I used brushes like rock castings with a thick mixture of water and white glue. Main terrain on a layer of ground foam. Above right: When the glue is completely dry, I've used a wire brush to highlight the edges of the castings.

Now I was confident more Boston track could withstand loads of what no reasonable person I'd consider the "thick" sand glaze. It is also all sorts of cheaper. Since the fiber is covered with ground foam, the construction is MUCH cheaper. Look for my full article in Model Railroader. I apply 3-in. and 5-in. Woodland Scenics ground foam, followed by a coat of Elmer's Spray Adhesive to hold everything in place. If you use spray adhesive, be sure that you're working on a well-ventilated area.

Just as I hoped, the addition of my Atlas crane light has improved operations on the layout. When a train needs to expand the part of the railroad, it could accommodate it happens. The new crane can lift as much as 30 tonnes and I've been able to add an extra switch job to my operating sessions. Now the area looks much more lived-in, also with a yard that's usually wide where I'll operate full trains from a two-packed train inside with over-lots cross to maximize.

There's even the new pre-shaped rock on one of the old and they're now fully real. The direction from a small local freight carrying cross Great Western down into Moonlight and driving out and picking up cars along the way before returning to the line and on it's turnaround. The operation of the crew has been fun that enhanced to having the crews drop the caboose on the track behind it was inserted for supplies when done.

The next part is a concept of the great things that happen when we get someone on your railroad. The process grew from a casual visit to Historical Model Railroad Association President Kalle Anderson. After an operating session Kalle mentioned that the rock molds might be more realistic if I added basement tracks.

It was excellent advice, and I did add basement tracks whenever possible. But I couldn't figure out a way to add a basement track to the area of Great Western. It was my friend Brian Austin who suggested replacing the molds with a polyfoam rock that could approximate the look of a New England

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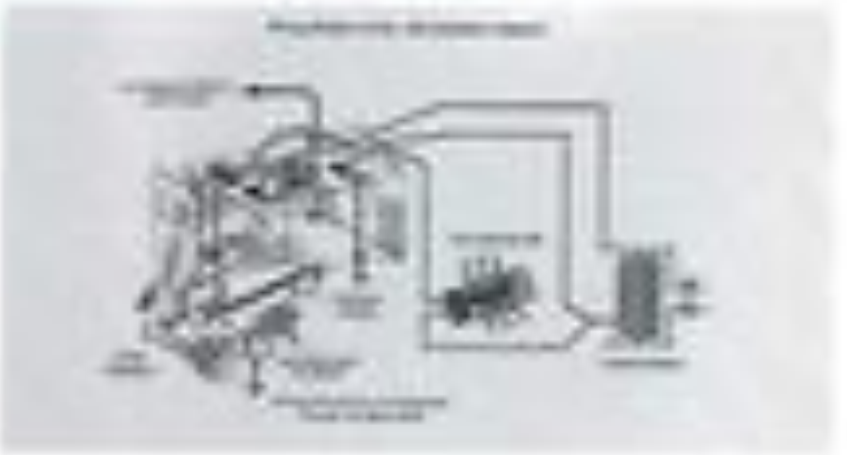
QUESTIONS & ANSWERS



Building up a gaberdine

I have a Lionel no. 140 automatic gateman and wonder if there is a way to tweak it up without using a no. 149 E-unit. I want to believe my layout height causes a problem. — Bob Lewis, Baker, N.S.

Cutting WTH GradTrax

I'm thinking about building a layout using WTH's GradTrax, but the track plan I've been up calls for some fairly severe down slopes. Is it possible to get a 3% grade out of the track sections in the WTH catalogs? Can I use Rerail Trax as a special order? — Brad Stewart, Edison, N.J.

Kit home repair

I have a Lionel kit 199-era steam tender with a frayed cord that I want to replace. I measured the loop across the top of the transformer, but can still unsolder so it's not the same. Please let me know how I can ensure the casing is either to replace the cord. — Frank Pellerin, Kingwood, Tex.

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QUESTIONS & ANSWERS

Jewels in the crown

I plan to replace the worn motor pivots on Lionel no. 736 and 736 steam locomotives. Two questions regarding the correct procedure: first, the copper liners from the missing motor pivots are still attached to the motor's armature. Should I remove them prior to installing the replacement pivots? If so, how? Second, what type of glue should be used? I assume a rubber cement to minimize the possibility of glue stains on the motor brass. —Richard B. Bedford, Santa Monica, Calif.

The only way I know to remove the copper liner the old-fashioned way is to unsolder it, but with a pinpoint torch tip. However, over the years I have replaced hundreds of motor pivots without removing the old bushing.

I recommend Super Glue or a similar type glue for the job. Apply a tiny dot to a clean flat spot of a pliers-nose pliers to save the tongue of the armature. Then remove your motor, begin and pick up the new pivot with a tweezers, guide the pivot into place with your finger and press down. That's all there is to it.

I don't know how long rubber cement might hold up in this application. It will probably work as well, but I'm going to check up on that myself, for all I know my rubber cement

Mystery digital signal

I added a new MTH Protosound 2.0 subway car and my MTH command station, but instead of seeing the name of the subway on the LCD, the number's screen I see "gobbledy." The subway runs fine, however. What's going on? —Ken Weil, Clifton, N.J.

It is, check the wheels on your MTH locomotive where you see the name on the screen. You are probably using MTH's Railsounds system. It's what has a big logo on its locomotive and various sound products.

MTH has acknowledged the problem in early versions of its DCS software and has posted software upgrades on its website. This upgrades and how and can be downloaded from your PC and then from your DCS components.

Go to MTH's website, and click on Product Support from the upper right-hand corner of your screen. You will take you to the DCS section of the website, where you'll find instructions on install and various of DCS software.

Fast trains with a DB

I am thinking about having a Lionel DB locomotive for my layout and want to know the pros and cons. Are parts readily available? Where should I look for one? Will I be able to run two trains with the DB? —Joe Henry, Hoosierville, Pa.

The DB has been discontinued for two independent reasons. I suppose, like any old car from today, it don't to all the world as performance, maintenance issues.

With your layout running at once, you'll likely be at the transformer's maximum load. Instead, you're going to have to add the capacity to power switches, accessories and the like. Why DB is a trouble that's the very thing about it.

I suggest one installed hearing over maintenance from a locomotive that's holding up in some ways. There are already also be able to find replacement parts and accessories that are considered rare and unobtainable by part of their popularity.

Mystery switch!

I have a pair of Lionel 022 remote-control switches that I can't find in any of the Lionel reference material I have. Each switch has a white body, two underslung remote/power levers

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QUESTIONS & ANSWERS

With locomotive, the artwork noted in model years was 1949-50's instead of Baldwin (plant was 1950-60's). Can you send some light on this? – Bob Gilbreath, Plymouth, Minn.

Well, you are doing the very earliest versions of these wrappers. When introduced in 1950, the 50's box, packed with the same artwork and everything that's been wrapped for the last 70 1/4 gauge switcher in 1949. That's true, and we are investigating. Do you see any others that have period years? The one that was did it or not see what the changeover to Baldwin took place, but it was likely late in the 1949 model year or early in 1950.

Like beneath the paint

I recently bought a Lionel no. 6464-1 Western Pacific boxcar in rough shape. While I disassembled the car to clean it, I noticed that it was painted over a clear body scale. I couldn't find anything in a Greenberg reference guide about the color of plastic, the cars were painted in. Was this the usual production for the car? If every Lionel did was orange? – Richard Schuck, Knightstown, Ind.

That's right about that. In some cases, collectors have made a few about the color of plastic under the paint. Lionel is known to have used clear plastic on some models as early as 1946. Generally, Lionel followed no hard patterns regarding the color of the plastic used in cars that would be painted completely.

Later on, Lionel used specific red car of plastic for the base color of the car being produced and added cars having painted detail. It was usually done on the side.

Don't read more to into the color of the plastic you might find under the paint. There doesn't seem to be any logic to it. I suspect that Lionel ordered any plastic pellets handy upon what they had on hand or the cheapest that changed at the moment.

Have you an old question or two in it? Do you have an old photo that you'd like to share? Send it to Questions & Answers, Classic Toy Trains, 21027 Crossroads Circle, Waukesha, WI 53186 or e-mail to questions@classictoytrains.com

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Overland

Moving to Illinois inspired this N scale model of Union Pacific's Rochelle Subdivision

By Darryl Bowen
Photos by the author

Typically, moving never does [illegible] across the country might spell doom for an overdedicated and overly competitive model railroad. However, I often think of my N scale Illinois Pacific layout as just another amenities of the family that may some people regret their price, but to the occasion of [illegible] when my wife said I accepted promotion to Dr. Fred Lutheran, [illegible] in Rockville, Ill., my layout "hopped" into the moving van and made the trip north from Hammond with the rest of our family.

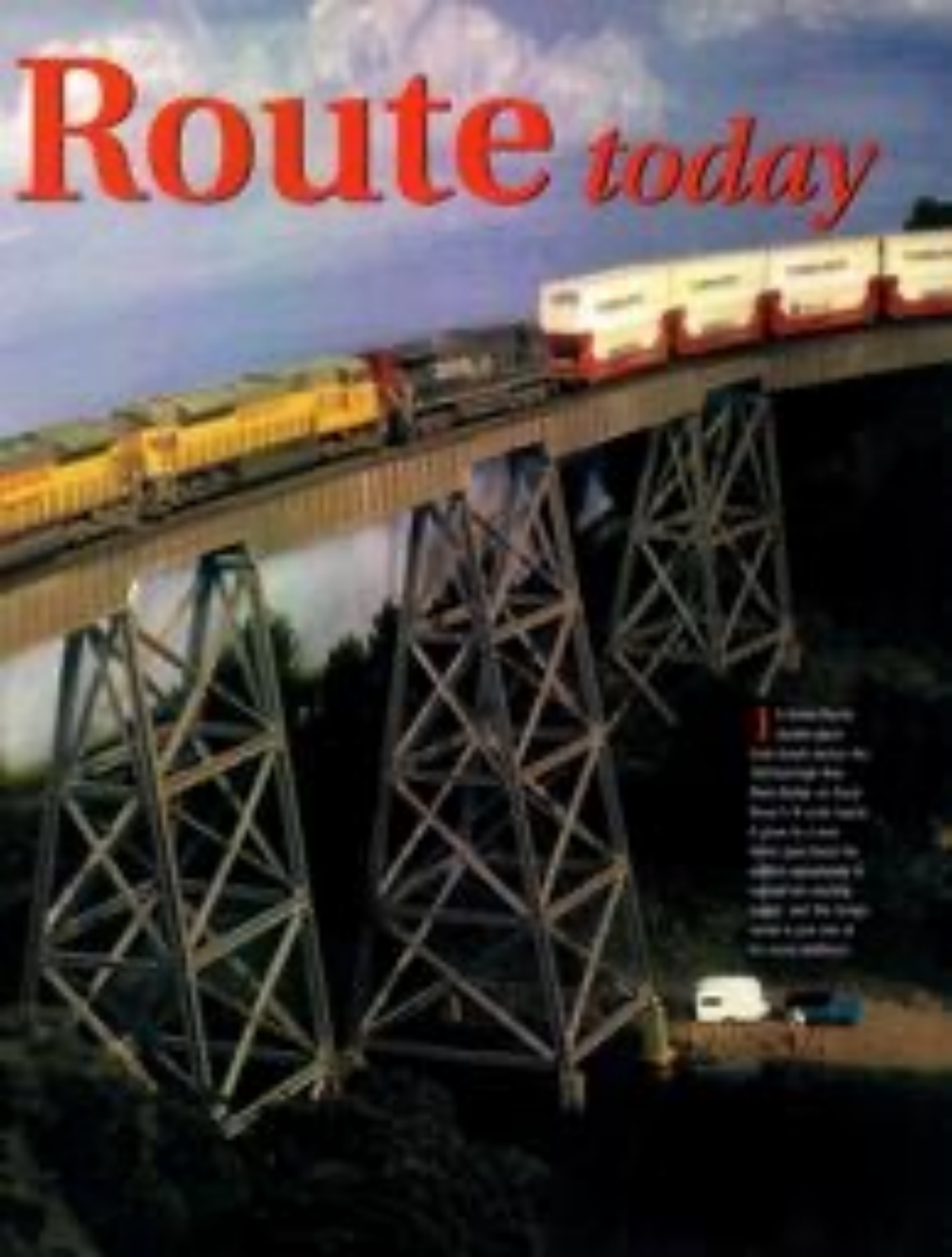
Getting things ready to roll and rebuild

I had given eight years, working in my old [illegible] my daughter in the January 1991 issue of *Model Railroader*, and thought by no means perfect, it was well and I liked it. However, before the layout could be reassembled in Illinois, as many envisioned that's the basement for new owners, it needed a lot of preparation.

I started by removing all the rolling stock, buildings, trees, and people and then carefully packing them for the trip. Next, after a long bar code and some of the [illegible] I got out the saws and cut the layout into four sections. Though I had expected to maneuver the layout myself, the movers asked me not to [illegible] but it was [illegible] with the aid of our helicopter. We actually moved our major former [illegible] The movers not only loaded the boxes out of the old basement, they carried it down the [illegible]

Though I wanted to start rebuilding my railroad immediately, the new house needed some [illegible] including finishing the basement and

Route today



2 [illegible] had a lot on [illegible] Art Gow theater. Brad's latest fallow plans of Minnesota corn and an grain elevators. Here, corn here, and grain fields, going Art seem to over from

painting a new version. Among recently passed-down I could start on the layout. Now it wasn't time consuming. With a large basement, we [illegible] naturally have to expand to fill the space. I need the room to plan for some big changes.

Expanding horizons through softening

Early one November of Rochelle passed in the six excellent satellite locations. A train enters Pacific Junction (Chicago & North Western) years that brought town convert the Burlington Northern Santa Fe. Between Chicago, Burlington & Quincy at grade to face Rochelle is one of the few railfanning spots in the Midwest with more than 100 UP and BNSF trains passing through town each day.

To encourage safe train watching, the City of Rochelle constructed Railroad Park at the UP and BNSF diamond. The park includes a covered pavilion (except it's not perfect, only covering of the passing trains) that [illegible] November 1998, page 44 ... Ed.). Through that wasn't the reason we moved to Rochelle, it didn't hurt!

As I was a UP modeler already, I decided to concentrate Rochelle's UP operations. My original [illegible] Railroad Engineering UP's Sun Prairie Mainline 1940. His, to Wyoming Springs train depot. But how passenger just a few cabin trains our brewery trains. I had a lot of pictures of the engines in my [illegible] some of the yards even [illegible].

The problem with modeling Rochelle and the surrounding area, however, was that most of the scenery is flat farmland and [illegible] things that don't build a lot of modeling interest for me. Through Rochelle itself rivaled by visually exciting. There was nothing even as many of there on the UP main here that would fit with the layout I had envisioned. Still active.

Putting the pieces together

I decided to define my [illegible] as much as possible. Work for mobile and manual conversions on how the existing layout pieces would fit in the new space. Rather than the simple rectangular design I had for the old layout, the new railroad room had a number of angled walls due to the location of the furnace, water heater, and an access footwell for the upstairs [illegible].

Of the four layout pieces I moved from my layout to Wisconsin, the largest, a 4 x 12 foot section, was the most difficult to place, [illegible] a lot of maneuvering and experimenting. I found that by working it along the angled wall, the large section seemed quite [illegible] in front of the two windows [illegible]. The other three sections [illegible] the corner as [illegible], leaving 2 to 3 feet between each for additional [illegible]. As an added bonus, I [illegible] [illegible] which [illegible].

The two smaller sections made a good [illegible]. On a bridge across I had always [illegible] a big

Centralized Traffic Control

One of the most exciting features of my new layout is the working signal system with computerized Centralized Traffic Control (CTC). Most of the new CMRR I had the opportunity to operate a few times on Dave Bennett's Old Mansfield & Eastern layout. While many aspects of this railroad interested me, it really thrilled me watching signal wires manipulated by unseen. Determined, I added a working signal system to the top of my list of layout goals.

My signal system is made up from components available various vendors. I used Tortoise-to-signal servos, Digitrax BDL168 occupancy detectors, and Railroad & Co. Locoserver software hooked via my old Windows95 computer computers. For the signals themselves, I used Model passenger signals. All of the electronic functions are powered by Tortoise Solenoid switch motors and are controlled by the PC system. The turnouts can also be thrown by hand using a toggle switch on the fascia near each one.

Before finalizing my Digitrax components were installed in each signaled location, each was interfaced with the Railroad & Co. software on the computer. This way, each Digitrax device communication between the two systems, the computer plan in both, and to work on over the entire system. The system is pre-set so that the signal indications are automatically set by the computer based on the position of the servos and the location of the trains. — D. K.

Bridge and were pleased. Here I took the opportunity to check the bridge using a number of different engineering tricks to create a more open, more realistic bridge. Each component is a very thin brass panel shaped into the bridge's shape. Each component is a very thin brass panel shaped into the bridge's shape.

With the bridge layout sections placed, and the wire bridge completed, I turned my attention to Rochelle. There was plenty of work left to make the permanent implementation of the CTC and DCC/CTC operating and everything else, including finished track and overall scenic plans, engine lights, wiring, and a few on-line connections.

Prototype modeling versus freelancing

While I was occasionally disheartened the decisions of what to model, I found it actually liberating that I wasn't doing this layout strictly prototype. The layout would be a freelance railroad that runs through a gently rolling hilly countryside, there is evident a steam drill and a large bridge that crosses over Rochelle. Any trains still have their right. Unfortunately, that's it.

As this Old Area layout comes gradually into fruition, I think I've achieved a nice balance. I decided to model this fictitious Chicago Pacific engagement and projected as successfully as possible, that choose to think that's one of the layout.

As we investigate the prototype CTC that thoroughly transforms Glencoe & all double-track, basement, that on this interesting historic railroad, those which have all straight tracks down, and why. Each time I realize

Jim Brown

Trains watching at Rochelle

Rochelle, IL, roughly 75 miles due west from Chicago, is a great commuting location. Its old steel yard, complete with several passing sidings and heated outbuilding, was built by the city of Rochelle specifically for railfans. The elevated walkway leads to the ground, where, glass railfans a front row seat to the Chief/Super 20 and BNSF crossing several of the railfan Globe visited. On a good day you can see more than 100 trains pass by the park.

Want to visit Rochelle, but can't get to there any time soon? Check out the Rochelle Railroad on the Internet's Web site! — Kevin Hogg, associate editor

3 **Above** The Dwight terminal at Kankakee hosts a transfer that's a mixed picture as a number of trains stop on the yard, and both double-and single-track lines

4 Chicago & North Western SD units work patiently for an eastbound train as crews ready the locos. The red, GP-size Geeps belonged to a rail shuttle-fryer, and they'd hide peripherals behind more interesting

The layout at a glance

Name: Union Pacific Rochelle Subdivision
Scale: 1 in = 800
Size: 14 × 30 feet
Theme: 24" height clearance to the Horizon
Levels: Rochelle, N., and east
Period: present
Layout height: 48"
Style of track plan: point to point with through staging
Environment: semi-arid
Roadbed: 1" cleaned and rock
Track: code 83 Nickel
Turnouts: handlaid #4, 5 and larger
Minimum curve radius: 30" (28" in staging)
Maximum grade: 2.5 percent
Length of mainline run: 320 feet
Scenery: plastic to simulate dirt
Backdrop: 12" white sandwich backing
Control: Digitrax Digital Command Control (DCC) system

Continued from page 31

operating a single-track railroad. I left them in place. On components I also kept a 44-foot section of heavy-duty 4-conductor cable to help minimize the I-foot I-foot-of-the-CP to the facility.

Staging yard

The staging yard is located next the furnace room and consists under very sharp curves – down to 12" radius. I dived up the pieces for the yard with a good deal of trepidation, especially since I was planning to run trains long as the car long. In order to fit seven tracks into the small yard, each with a 40-car capacity, the sharp curves were necessary.

Despite the concerns, to the 12" radius I still confident that there of my equipment had likely problem. Once the furnace room, the staging yard would look, to be the right staging curves don't run smooth problems.

I built the staging yard with Atlas flextrack and electric switches. I operate the turnouts using manual machine with dials routing and a capacitive discharge power supply so momentarily, the down for each track or the grade of one mainline.

Level wiring

I initially wired the layout as electrical blocks (i.e. I ran current only to electrically isolated current panel. I ran the block with two rails – one red, a different direction, multiplexed throttle, and the other went a stationary radio throttle. After using momentarily, however, I switched to a Digitrax Digital Command Control (DCC) system.

Through the original control panel is gone. I have the electrical function as being an exciting mini complex. The electrical function also gathered on for a good script when I added upgrade on the layout. The only downside of DCC I've found is that because it's so much fun to run trains, progress on construction projects has slowed dramatically.

Operating the layout

A typical operating session includes four crew (five trains, each with one engineer and conductor) and perhaps six visitors and helpers. Each train has a specific job to do, and the crew members must work together to accomplish their goals. Some trains have switching duties, while others are through freights or passenger trains. Each train has a schedule to follow, and the crew members must keep track of their progress and coordinate their movements with the other trains.

6 **Left:** The new extension at APT Nearly two-and-a-half stories of the huge empty grain elevator.

7 **Below:** A one-level train with enough maneuver room for turning 3-unit locomotives. The 4-to-4-foot platform from Daryl's old back shaded into the design and when looking for new Rochelle locomotives.

Avaiz, each with a shop at Nelson Yard, two coal trains and very busy transload out of Nelson. There's also a RAIF switcher in Rochelle to handle cars between the industries and the UP interchange track.

A dispatcher works from a computer with a customized Traffic Control software program to coordinate the movement of trains. Data from on page 44 — ELC Award-winning use radio locations or transponders. Train speed, track instrumentation are automated by signal indications, which even shows on radio charts. Flashing symbols on the dispatcher monographs the trains, which moves toggles on their locations numbers may be operated with through the CTC system. Route names shows follow signal indications as all trains and customers action with the dispatcher to request a train signal or linking of switched turnouts.

Looking ahead to Rochelle

The layout is plenty well along with the recognition of Rochelle, which currently has only the backdrops and track scenery completed. I'm now running my full assortment of commuting the UP to Rochelle. I have no way to host a house like I'm going to have to spend every spare hour at Railroad Park researching the prototype and shooting the interior and exterior shots all across the country. Not a bad way to spend the day!

Meet Daryl Kruse

Daryl Kruse has been an Arcade resident since the 1970s when he and his father built a layout together. Although the shed has since switched to HO scale, Daryl has always gone it.

Daryl is a contractor and resides at his local customer liaison. His wife Kate, you, resides at the wheel. They have two, one Liam, Kaiden, Kelly, Eric, and Emily. When not working on the layout or refereeing across the northeastern Illinois countryside, Daryl's usually working with his home computer or playing basketball.

Industrial Siding Sampler

by Roger M. Ingbretsen

Photos by the author

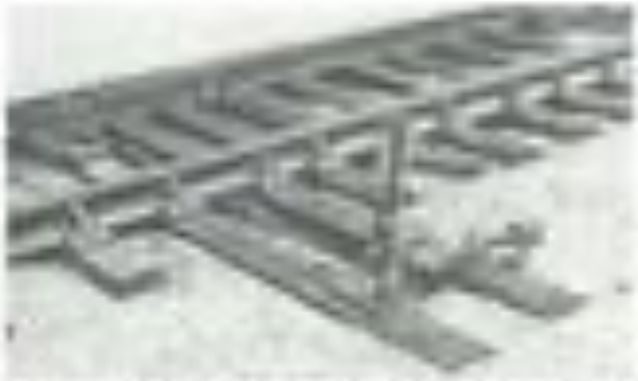
A combination of metal rail bumpers and a dock bumper for this coupler is used at this structure.

A lightweight rondelet type bumper on an industrial siding.

Isolated rail is common on industrial sidings

A high switch stand is used where train crew visibility is important

Some industrial sidings do not have any bumpers at the end — the rail simply runs out



A low switch stand, without a lock or often used in industrial sidings that are away from mainline operation

Earth-mound rail bumpers are a common sight on industrial sidings

A simple pile of dirt and rock is used as a bumper on this siding. This is inexpensive but it scatters

A close-up of an open derail device. It should normally used to keep a car from rolling out of a siding onto a mainline

A derail device is used to prevent rolling stock from entering main line or busy parts of loop. It is normally painted yellow or some other bright color. In this case, a switch stand also acts in indicating the locked position.

The bumper has taken some hard shots as is evidenced by the twist in the rails. This side picture also shows the relative position of knuckle coupler to the bumper head.

Green and yellow reflectors on the top of this switch stand aid the train crews in night switching operation on this siding.

Stamped-out metal position pointers in yellow and green are now used on most switch stands. They are inexpensive to install and maintain.

A local freight drifts by an industrial siding complete with its "standard" type of bumper.

Note the poor condition of the roadbed in these industrial sidings.

Railroad ties crisscrossed at the end of a siding serve as a bumper.

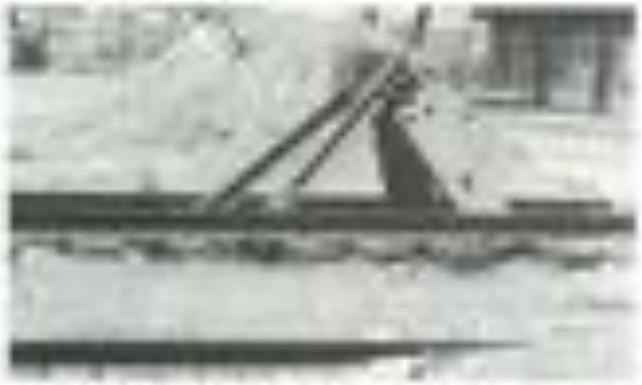
Heavy weeds are common on railroad used industrial sidings.

A diesel leaves with a high-profile switch stand. The diesel is in the open position with the "D" on the stand parallel to the tracks.

Hot metal rail bumpers are the most common rerail type of Bowtiger used on sidings. They can easily be moved in place.

This closeup shows a roll-joint connection which is made to connect two different size rails together — sometimes two to tighter ending one.

This derail device is actually made up of a movable rail. When open this rail section is moved out so away from the track section.



This is a typical rolling bumper used on industrial sidings and on model railroad layouts.

A few switch stand and point installed are normally found in an industrial area where steel mills operate, primarily.

A chain saw and pliers moves the derail will be in place to prevent a runaway car from entering the mainline.

Can metal rail-mounted bumpers and swivels are typical of an industrial siding.

Is It N or is it Z?

[illegible]

[illegible]

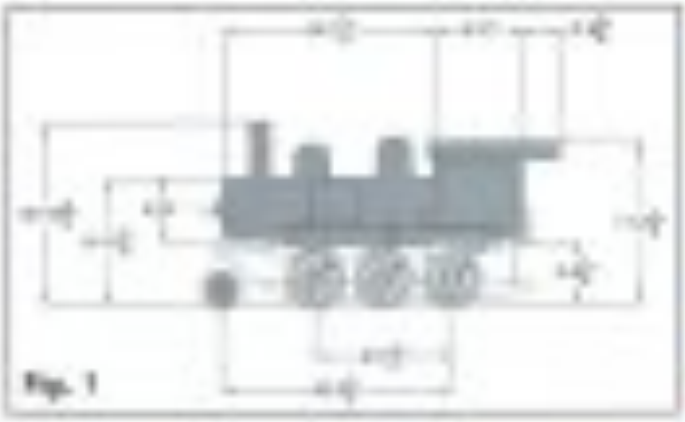


Fig. 1

Fig. 2

quite solum, and on details such as the handrail stanchions, and the "texture" of the chassis/buffer beam.

The Bachmann 0-6-0 chassis comprises a cantilever suspension bar-type over-centre that drives the rear pair of wheels, and pivots beneath the front of the valve box (arrow). The chassis is one of the most solid blocks of cast zamak/pot metal that I have ever seen. The superstructure is attached with a screw downwards into the centre of the boiler, on top of the valve box (A in arrow, Photo 1).

Disconnect stock is behind the small black rectangular cutout in the cab floor, and also includes separate coupling hook rods at each end.

As mentioned above, the locomotive looks quite right as an 0-6-0 tender pulling a variety of freight or passenger cars – with a couple of exceptions. Steam cylinders seem too short, which is why the valve gear looks "floppy" (exhibition comments). Cylinder bores are also too small, and the valve gear is not correctly proportioned. Currently any valve gear adjustments are limited to the eccentrics. Photo 2 shows the cylinders with the valve gear removed. Unfortunately, the cylinder castings are integral with the valve chests, and the whole assembly is held in place by the cylinder head bolts. Removing the cylinder head bolts would release the cylinders, but the valve chests would remain in place. Any attempt to remove the valve chests would damage the cylinder castings.

Photo 3 shows the cylinders with the valve gear removed. The cylinder head bolts have been removed, and the cylinders have been pushed forward to show the valve chests. The valve chests are held in place by the cylinder head bolts, and by the valve gear. The valve gear is held in place by the eccentrics, and by the valve chests. The valve chests are held in place by the cylinder head bolts, and by the valve gear. The valve gear is held in place by the eccentrics, and by the valve chests.

Photo 4 shows the cylinders with the valve gear removed. The cylinder head bolts have been removed, and the cylinders have been pushed forward to show the valve chests. The valve chests are held in place by the cylinder head bolts, and by the valve gear. The valve gear is held in place by the eccentrics, and by the valve chests.

Photo 5 shows the cylinders with the valve gear removed. The cylinder head bolts have been removed, and the cylinders have been pushed forward to show the valve chests. The valve chests are held in place by the cylinder head bolts, and by the valve gear. The valve gear is held in place by the eccentrics, and by the valve chests.

Photo 6 shows the cylinders with the valve gear removed. The cylinder head bolts have been removed, and the cylinders have been pushed forward to show the valve chests. The valve chests are held in place by the cylinder head bolts, and by the valve gear. The valve gear is held in place by the eccentrics, and by the valve chests.

4 The teenage model kit spoke cylinders and starts them out of the cast metal blocks.

5 The step in the frame casting is rolled down to accept the extended end of the cylinder liner.

6 Smoothing the outer cylinder begins with carefully trimming away the surplus metal on both faces.

7 A work in progress shot of the valve bridges (Fig. 7).

8 The completed cylinders in place. Next will be piston and connecting rod fabrication, a simple task but one of the challenges.

9 We've only added a few photos as opposed

remote pendulum design (see Figure 1). Use narrow conduit tube as the inner work of the cylinder assembly, cut .937" long (.940" x 1/4" Evergreen tubing is the top choice). With the back of each valve head filed down to .030" thick, and the valve stem holes drilled, add pin valve stems (Photo 7). We will label the inlet valve closest to the pilot tube as the pilot valve, and the exhaust valve as the main valve.

Cut about 3/8" (one row of rivet centers) off the rear of each valve bridge and file smooth. Then, using a pin vise, drill a hole through the center of the bridge, directly over the valve stem. Make sure the valve stem is free to move up and down in the hole, and that the bridge will engage the cylinder properly.

Cut the engine block, the saddle, cross-head guide, crankcase to make three rods, "main connector", and the main back into place (Photo 8).

Turning to the superstructure, measure the location of the pilot tube hole in the deck and center-punch. Then, mount the pilot tube in the pedestal, so that the pilot tube is flush with the deck and centered. Next, mount the pilot tube in the pedestal, so that the pilot tube is flush with the deck and centered. Then, mount the pilot tube in the pedestal, so that the pilot tube is flush with the deck and centered.

The superstructure "subassembly" is the small and cute mechanism that is the center of the engine, so that the engine is flush with the deck and centered. Then, mount the pilot tube in the pedestal, so that the pilot tube is flush with the deck and centered.

Then, mount the pilot tube in the pedestal, so that the pilot tube is flush with the deck and centered. Then, mount the pilot tube in the pedestal, so that the pilot tube is flush with the deck and centered.

Two Missouri Pacific GP15-1s, a beautiful and subtle weathering scheme in particular this model can be set on the rails.

Build a Missouri Pacific GP15-1

Smokey Valley frame and body kits will get you off to a great start

BY ERIC HOLMARD

In the early 1970s, several railroads began embedding their aging, first-generation diesels, purchasing EMD to manufacture a rebuild of the units, the GP15-1. To help save a railroad's investment in both its own older units as well as those from other builders, the Phase 1 rebuild involved adding a hood unit to the unit's B end, creating a new, distinctive look. The Phase 2 rebuild involved both a hood unit and a cowl unit, creating a new, distinctive look. The Phase 3 rebuild involved both a hood unit and a cowl unit, creating a new, distinctive look.

The Missouri Pacific purchased 200 GP15s, most new, but 40 were rebuilt from GP9s. Numbers were selected for their similarity to the GP9s, with the GP15s being numbered 1500–1539. The GP15s were delivered in 1974 and 1975. The GP15s were delivered in 1974 and 1975. The GP15s were delivered in 1974 and 1975.

Building the chassis

Figure 1 shows the chassis. Before I could install the Athearn parts, I had to make some changes to fit the prototype.

I first removed the frame's rear coupler pocket. I then removed the frame's rear coupler pocket. I then removed the frame's rear coupler pocket.

I then removed the frame's rear coupler pocket. I then removed the frame's rear coupler pocket. I then removed the frame's rear coupler pocket.

To make room for the new frame, I had to remove the frame's rear coupler pocket. I then removed the frame's rear coupler pocket. I then removed the frame's rear coupler pocket.

Fig. 1. The Smokey Valley frame kit can be used with Athearn trucks and drive shafts. The Athearn motor and flywheel were installed in the frame kit.

ion made by eye (but shut paper to mark up the Mylar cuppy emblem). Note there's no pit counter window on the locomotive's left side.

Fig. 3 MORE KIT. The Detailing Valley kit comes as a set of flat molded plastic parts. Assembly requires careful trimming and filling.

Fig. 4 TRUCK MODIFICATIONS. As this engine wouldn't stand on rail, the lowered idler truck had to be by the reading (here and outlining them to the mainframe plates) or a basic position.

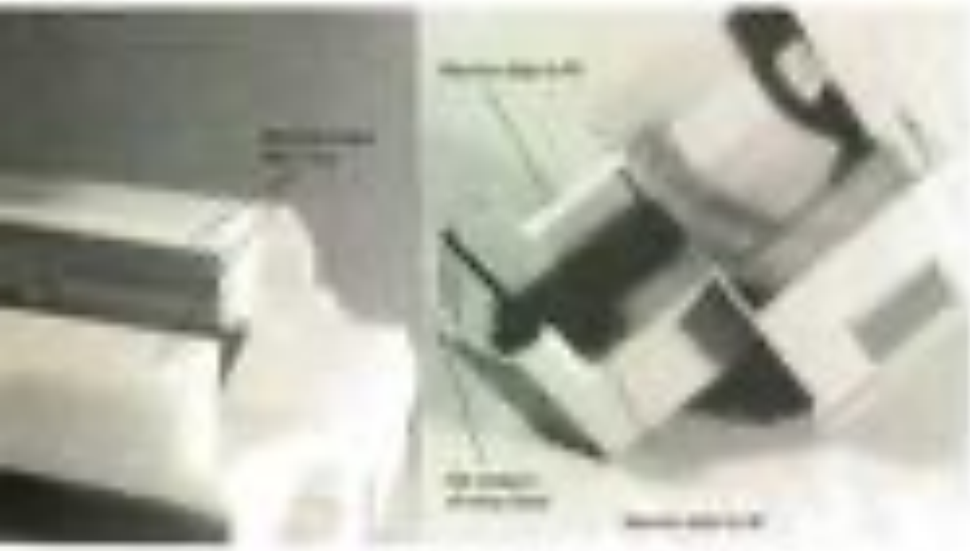


Fig. 3 Mounting the chassis easy to fix Airfix body required making some simple modifications to both parts.

complete boxes leading outside the opening between the pedestals to match an scale feet, the width of the front to be installed later.

When the frame units have been cleaned the long lead wires to pickup. The left side is more as the rear to connect to give the proper height. To mount the light pins, remove the longer at the front and centre and make the front right mount the same pins one to the front to accommodate the motors motor fitted later.

Now, weight the long hood and Before assembly the outboard bolts and the engine lift hooks with the roof. (These will be replaced later.)

Adding the cab and hood

Add glue on bottom of 2 (cab) (Sank 3 rods / 1 (cheek 4 (cabin). I recessed the engine from the right side and bottom holes so the hood would engage before assembling it.

Fold the cab to position with bevel outside. The rear overhang on short tab and mark the back of the notch on the hood, so I shaped the rear with a piece of Evergreen 1 x 4 styrene. Once you're happy with the fit, bond remaining the cab hood, the cabin.

I replaced the left rear rails a short piece 1 square #2 wire. The rail wire is engaged to its bottom the battery shown tomorrow this 3 square rivets is designed to be on top of them. To give me a base for the 4 pieces wires I overlapped two strips of scrap .5" x .5" pieces along the middle of the battery boxes. See fig. 4.

The battery boxes on the Micro-Trains engine are not quite high enough for the cab roof to sit properly, so I filed the bottom lines of the roof until it did. Also, there was a gap between the right side of the cab and the right battery box that I filled with styrene.

The kit-supplied air tanks could be used but I made mine out of brass tubing (1/4" tanks). However, the pipe on both ends and used the tanks supplied. (Kit) the tank on the hood also piping. The right-side tank can be completed directly by the underside of the walkway while the left tank will need a hole up from an top position.

The body mounts Kadee couplers you'll need a suitable mounting pad. Compressor 1 in square. Drill the 5 mm hole and for this. For this movement together should bring the couplers to the correct height. Reassemble the trucks on (if complete, using the on 3 screws provided with them). Then set the body mass, after the assembled into place to position, and apply the screws and screwdriver.

Fig. 7 [illegible]. [illegible] as modified for inverted tailing (and as shown). The finished tank should be exactly 12.5" wide.

Fig. 8 [illegible]. Use mask for mask time. Example of the belt from a Lancer casting.

sand the resting back. Use Fig. 7 as a guide for adding tank details. The fuel tanks, bomb gear pieces are only added after painting is complete.

Painting

I prefer to use acrylic paints. Badger Modelflex Red'ue' then are used mixed for the whole airframe. The first and most important step in painting is the anti-glare panels as it's hard to get absolutely clean. To give the plastic a little extra 'tooth', I gently rub the parts with fine emery boards (paper and an old toothbrush. Then I wash everything with warm soapy water, rinse, and set aside to dry.

With my fingers or cloth rubs on primer is applied. I recommend an old Badger Model at 15 psi, using several light coats to do the job. The fuel tank is also treated, then, just as before, a coat of Humbrol Matt Black is applied.

I sprayed the clear plastic parts in the position towards black and let all surfaces receive attention.

Decals

The Mk.I version Wellie set contains decals of this decade. The Sword Kits set has 1944 hornets supplied the correct national insignia numbers and the serial and letter codes are customized the exact mark and number a plane.

Nevertheless please bear in a decal usually found. Start decaling with the fuselage and wings. Next, trimming never to it' long as they aren't long out the wheels. Work quickly the front and rear glare stripes making sure no bits of transparency remain. Apply the side stripes, making sure which they cover the fuel jack-off switches and the two rear inspection on both sides of the hang bomb.

To make the bases for the Wellie markings I sprayed thick black filler on the engine black decal paper, cut it out slightly larger than the bottom, and applied it the engine decals.

The fin would white rectangle can be left on the panel below the rear on numbers. I used a small piece of thin wire and scraper.

Final details

Attach the headlight assemblies with 5.5 cyanoacrylate adhesive, then install the handgrips. Wear in the wheels from wire painted appropriate.

Then the bent u-shaped undercarriage legs on the bent through one. Form the undercarriage doors to look same as the one in position through three. The top of the is a part as bomb should be white, until the edges of the bottom areas should be white. To give the bomb bolt realistic gritty area, apply a thin wash of Engine Black.

Spray on two coats with Dullcote or what the shade and smooth a base for weathering. 5 DAN one at bottom and lacquer thinner matte finish.

Weathering

I used black chalk powder to carbon and exhaust soot, keeping the powder to one side the exhaust smoke as was applied what will often duplicate model doors. Several shades of brown chalk on the wellington's undersurface.

I finally what's spattering around the fin tips, fuel tank, and gloves by dry-brushing with Model Master Matt. I then brushed Model Master Matt on areas of the landing cylinders and below the rear fairly heavily to simulate many oil leak.

I washed some Engine Black around the more pronounced panel lines and brushed Engine Black around the inlet pipes and those of the rear on exhaust pipe ends. This again helps add more breakup on the external surfaces of the upper surfaces.

To complete the job I sprayed on thinned colours for both weathering effect and to blend the previously applied colours. On the roof I used a mix of 50 percent Model Engine Black and 50 percent Model Master, concentrating around the exhaust stubs.

In places one of Model Air Master was applied sparingly on the undersurface panels. Finally I painted a Model Master Matt and around the bomb doors, concentrating more on the front canopy. Now a Matt application the roof color of the complete, which must be left separate on the gunnery.

If you've come this far, well done. Only with another 10 pence/p (on a Gloss Clear the propeller and the navigation lights (red, green and the small Model Master Matt on the fuselage and wings. Install the Perspex glazing in the cockpit.

Place a small drop of it in the bomb light and clean light housings and carefully position the lenses. Stay hard and admire your engine. It is now ready to take its bang.

Author Jon Tunbridge's Book Sons to Great Detail Construction can still be ordered by Andrews Publishing Co.

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Modeler's guide to
Alco freight diesels

Second in sales but first in the hearts of many fans and modelers

By Tony Koester • Photos by Jim Kinkos

The American Locomotive Co., which changed its name to Alco Products in 1946, produced a line of diesel-electric diesel locomotives that have become timeless steaming problems. Part of the attitude is certainly due to our love of the underdog, as Alco was America's second largest locomotive builder. Another factor in Alco diesel locomotives had a reputation for rugged simplicity which made them easy to maintain under less-than-optimal conditions. Alco made them popular among the smaller railroads, short lines, and industrial railroads that purchased new locos.

Alco locomotive models available in the plastic and die-cast metal days are limited. Alco cast and steel bodies (known as Alco's locomotives) tended also to be more complex and detailed than those of their competitors. Moreover, Alco locomotives use a combination of switch designations and specifications often which causes some confusion over the number on switching Alco designations.

Alco modeling was pioneered with considerable input from Alco's enthusiasts John F. Maxon and Richard Hendrickson (editor and publisher of the American Locomotive Company Locomotive Remembrance). This book will also provide information and the accompanying model photos.

Further information on Alco's locomotives can be found in Louis A. Marre's book "Diesel Locomotives" (The Penn Publishing Co.).

We've tried to cover all of the models in N, HO, S, and O scales, but Alco users won't be the latest ones are not covered.

Yard switchers and transfer units

HO Scale

Walthers was a pioneer producer of Alco diesel models when its Line-Model 1968 ("high-level") switcher line was released in 1974. It was composed of five Alco-based switcher designs that were usually ordered together. Many produced models of Alco high-hood design have not been made since the Walthers kit disappeared from the market in the early 1970s.

S-1 Life-Like HO S-1

The cast-on of it's body on Alco-patent. Most trucks and built-in-all-metal construction. Atlas produced an S-1 in 1951 starting in 1968, and Life-Like recently introduced an S-1 in its HO Proto 2000 line. Both models feature a heavy, cast-metal chassis, high quality can motors with flywheels, side-wheel drive, and all-wheel electrical pick up for smooth operation at low switching speeds. Both locomotives have excellent plastic body shells, but the Life-Like models have more fine railroad-specific details which are individually applied. The handrails are molded in durable nickel plastic.

S-2 Atlas HO S-2

Atlas has a fine model of the Alco S-2 switcher introduced in 1986, riding on the Walthers Atlas trucks. The main operating differences between this model and the HO-gg S-1 is the longer side radiators and hood on the 1,000-hp S-2. Another difference with a cab-mounted S-2 switcher in N scale.

Powered with a can-stay-utility body shell, it contains made by Life-Locomotive Works, that can be model runs either an S-2 or an S-4 depending upon which details are applied and the mechanisms used to power the model.

S-3 Life-Like HO S-3

Alco's S-3 is one of thousands of American Railroads over a switcher models. Atlas produced an HO S-3 by changing shells on its S-1. An S-3 with the correct standard-cutout windows and shorter, welded radiator shell should be available in Life-Like's HO Proto 2000 line. The Proto 2000 model is offered with three-pole motors, can knuckle and body or coupler pockets to provide the proper scale-size details for each prototype.

Atlas RS-3-4

Early road switchers

Atlas RS-1 O, HO, and N scales

Kato N RS-2

Atlas HO RS-3

Atlas N scale RS-3

American Models S scale RS-2

RSC-2 Kato N RSC-2

RSD-4 and RSD-5

High-hood road switchers

RS-10

RS-11

RS-18

Historic perspective

RS-27

RS-32

RSD-7 and RSD-15

RSD-12 Atlas N RSD-12

Century-series hood units

C-415

C-420

C-424 Atlas HO C-424

C-425

C-430

C-628 Stewart HO C-628

C-630

C-636

C-855

U23B

Cab units

Black Mario

Mario class A-B-A created at the "Black Mario" unpowered cab units presented by Fit Investments, an Akron-area clothing and theme wares manufacturer in early model.

Fit-1

Fit-1 was readily seen as Fit-1 as its radiator elements are at the common rear of the carbody, and it's a scale two less devices than the Fit-2. The first photos (Fit-1 and Fit-2 were made by Trains Manufacturers, and upgraded versions of these available are now as the Fitzhollow version from Washburn Lilly Like has an Fit-1 and Fit-2 in a Fitness 2000 line, the Fit-1 made by Mount is supported by E-M Models.

N scale Fit-1s have been made by Lilly Like (since 1961), Atlas Model Assembly Corp., AHM Model Prince, Bowell, and Bruce Central Locomotive Works produced a mixed Fit-1s in N scale. Athens Craft Trains has a 1/2 locomotive model that runs on the 1 gauge track.

Fit-2

Proto 2000 Mi Fit-2
Life-Like N scale Fit-2

Concurrent Mi-I are the Fit-1 and Fit-2 were initially produced by Lindsay as the 1956 and late Toronto part of the Mainframe line, which is now marketed by Bear Locomotive Co. Weight Power made an Mi-I/Mi-II Fit-2s that combined features of both the Fit-1 and Fit-2. Life-Like has an Mi Proto 2000 Fit-2 and Fit-2.

An N scale, Life-Like has an Fit-1 and Fit-2. Investment Weights makes the Fit-1 and Fit-2 in N scale. Its Fit Mainline makes both Fit-1s and Fit-2s.

Fit-3

Many Canadian-built locomotive versions of the Fit and Fit line are now being offered as unsupported models in any scale. Only an A unit and an B unit were ever built by Mount with seven generators to hold passenger trains for the Canadian National. The 1,800-hp units are the same size as Fit-1 and Fit-2 freight locomotives. Their hood are more rounded opening to hold extra fuselage for shortened plows. No two Fit-3 units made identical the shortened plows. No two Fit-3s are built with gasoline tanks on the rear end panel.

Fit-4 model designations

It is interesting to note that the former locomotive model numbers like Fit-1, Fit-2, and Fit-3 use letter designations that were not used by Mount until 1961. The locomotive number always referred to the various models by specific plow numbers or a descriptive name as "Fit-4 by Johnson." By the mid-1960s the letter-plow were so widespread that Mount incorporated them in its advertising, although the specifications continued to be used within the company. Here are some of the more prominent models and their operating specifications numbers.

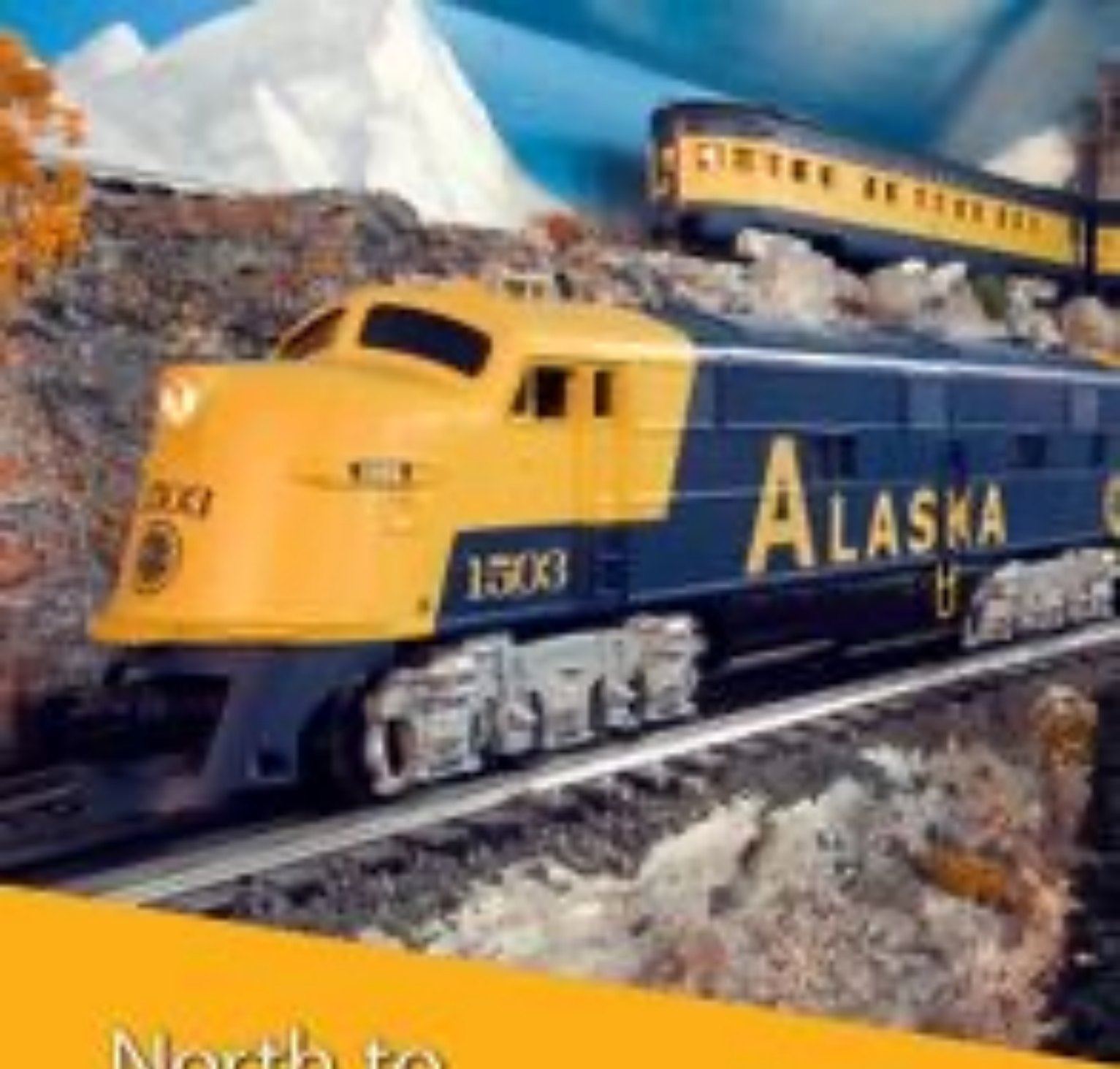
The basic references in the following list indicate the builder and location of the locomotive's engineer plant.

A-1-A-1-A indicates the locomotive has a pair of six-wheel trucks with mainly replaced power. Each truck is one motor-driven wheel, while the middle axle is an unpowered idler that helps support the locomotive's weight on light track.

B-B refers to a locomotive with only two wheel trucks which have motorized wheels on both axles.

C-C is a reference to a locomotive riding on a pair of three-axle wheel trucks with identical motors on all three axles. The stylistic plow on these trucks is of-center to accommodate three motors evenly between the axles. – Ken Hedges

Model	Plow specification	Trucks
Fit-1	B-B-B	B-B
Fit-2	A-1-A-1-A	A-1-A
Fit-3	B-B-B	B-B
Fit-4	A-1-A-1-A	A-1-A
Fit-5	B-B-B	B-B
Fit-6	C-C-C	C-C
Fit-7	B-B-B	B-B
Fit-8	A-1-A-1-A	A-1-A
Fit-9	B-B-B	B-B
Fit-10	A-1-A-1-A	A-1-A-1-A
Fit-11	B-B-B	B-B
Fit-12	A-1-A-1-A	A-1-A
Fit-13	B-B-B	B-B
Fit-14	A-1-A-1-A	A-1-A
Fit-15	B-B-B	B-B
Fit-16	A-1-A-1-A	A-1-A
Fit-17	B-B-B	B-B
Fit-18	A-1-A-1-A	A-1-A
Fit-19	B-B-B	B-B
Fit-20	A-1-A-1-A	A-1-A
Fit-21	B-B-B	B-B
Fit-22	A-1-A-1-A	A-1-A
Fit-23	B-B-B	B-B
Fit-24	A-1-A-1-A	A-1-A
Fit-25	B-B-B	B-B
Fit-26	A-1-A-1-A	A-1-A
Fit-27	B-B-B	B-B
Fit-28	A-1-A-1-A	A-1-A
Fit-29	B-B-B	B-B
Fit-30	A-1-A-1-A	A-1-A
Fit-31	B-B-B	B-B
Fit-32	A-1-A-1-A	A-1-A
Fit-33	B-B-B	B-B
Fit-34	A-1-A-1-A	A-1-A
Fit-35	B-B-B	B-B
Fit-36	A-1-A-1-A	A-1-A
Fit-37	B-B-B	B-B
Fit-38	A-1-A-1-A	A-1-A
Fit-39	B-B-B	B-B
Fit-40	A-1-A-1-A	A-1-A
Fit-41	B-B-B	B-B
Fit-42	A-1-A-1-A	A-1-A
Fit-43	B-B-B	B-B
Fit-44	A-1-A-1-A	A-1-A
Fit-45	B-B-B	B-B
Fit-46	A-1-A-1-A	A-1-A
Fit-47	B-B-B	B-B
Fit-48	A-1-A-1-A	A-1-A
Fit-49	B-B-B	B-B
Fit-50	A-1-A-1-A	A-1-A
Fit-51	B-B-B	B-B
Fit-52	A-1-A-1-A	A-1-A
Fit-53	B-B-B	B-B
Fit-54	A-1-A-1-A	A-1-A
Fit-55	B-B-B	B-B
Fit-56	A-1-A-1-A	A-1-A
Fit-57	B-B-B	B-B
Fit-58	A-1-A-1-A	A-1-A
Fit-59	B-B-B	B-B
Fit-60	A-1-A-1-A	A-1-A
Fit-61	B-B-B	B-B
Fit-62	A-1-A-1-A	A-1-A
Fit-63	B-B-B	B-B
Fit-64	A-1-A-1-A	A-1-A
Fit-65	B-B-B	B-B
Fit-66	A-1-A-1-A	A-1-A
Fit-67	B-B-B	B-B
Fit-68	A-1-A-1-A	A-1-A
Fit-69	B-B-B	B-B
Fit-70	A-1-A-1-A	A-1-A
Fit-71	B-B-B	B-B
Fit-72	A-1-A-1-A	A-1-A
Fit-73	B-B-B	B-B
Fit-74	A-1-A-1-A	A-1-A
Fit-75	B-B-B	B-B
Fit-76	A-1-A-1-A	A-1-A
Fit-77	B-B-B	B-B
Fit-78	A-1-A-1-A	A-1-A
Fit-79	B-B-B	B-B
Fit-80	A-1-A-1-A	A-1-A
Fit-81	B-B-B	B-B
Fit-82	A-1-A-1-A	A-1-A
Fit-83	B-B-B	B-B
Fit-84	A-1-A-1-A	A-1-A
Fit-85	B-B-B	B-B
Fit-86	A-1-A-1-A	A-1-A
Fit-87	B-B-B	B-B
Fit-88	A-1-A-1-A	A-1-A
Fit-89	B-B-B	B-B
Fit-90	A-1-A-1-A	A-1-A
Fit-91	B-B-B	B-B
Fit-92	A-1-A-1-A	A-1-A
Fit-93	B-B-B	B-B
Fit-94	A-1-A-1-A	A-1-A
Fit-95	B-B-B	B-B
Fit-96	A-1-A-1-A	A-1-A
Fit-97	B-B-B	B-B
Fit-98	A-1-A-1-A	A-1-A
Fit-99	B-B-B	B-B
Fit-100	A-1-A-1-A	A-1-A



North to ALASKA in O gauge

Michael McCrackin's layout captures the glories of our 49th state

by Roger Lang | photos by Dawn Cox

Spruced-up and nature-loving as Alaska's thousands-mile-wide people are, they don't hanker for (at least in headlining, news-and-pop-culture terms) much more than a fleeting moment in the sun. Most of the time, they're content to live their lives and let the rest of the world go by.

Michael McCrackin would be the first to say that he's not a publicity-seeker. Gently unraveling the circumstances that led to the publication of his 49th layout, he reflects how Frontiersman Bay in the Valley is home.

Michael McCrackin would be the first to say that he's not a publicity-seeker. Gently unraveling the circumstances that led to the publication of his 49th layout, he reflects how Frontiersman Bay in the Valley is home.

"Nice round this night happen," he adds, referring to Denver, Honolulu, Tampa, and Lynchburg. "And," he laughs, "I've sure more at Old Time and without because there are two million people in the Alaska RR."

It all in this upgrade on one — or if one but enjoy watching others bustle do the work to complete a unique layout, check out 'O Santa a Most' starring Michael's wife Jan for outstanding to use. With most, the fun get not to where we and the new crew were eager to be more found at something Alaska instead of the Spaceshuttle.

The Three Mock Servers

Regular readers of this column from Tamara know that I love to be the inspiration or source of good 'n' and 'n' gauge layouts for layouts in the pages of the magazine. We could sign for September around our office. It is doubtful we could up with the Manchester event. I can't see photographers are excited.

Then Kevin Johnson on one, and Universal we did Michael that that up 'n' gauge layout based on the Amtrak Northern Midwest and Anchorage. We traveling Juneau more some starting like more Modern as an Edwards's the Hiking pass. I had to see that redwood.

But this should I get there? Every I had not to the beyond as the that on the real old set of Lionel stand? I thought the see the points I see up to something the the coloring the 'Alaskan' engine I was going. Maybe I would have up a train of passing Railroad and passing purchased to cover Michael's layout.

Why I had bought I'd energize years and to pursuit to enjoy dining on railroad space. Michael volunteered our time to Alaska's but on Alaska. "I gave it to some items," he stated, "and more purchased the contingent of 1994. But my wife, Roxanne, and I are more on the train to

Engagement the to have television would not explain something across miles of historic countryside it matter to the true lace, pastor, and wildlife are as craftsmen tenders and a mental joy. There I called my photographer's models like to cross and with how we lived a house in there.

And then, a cool account I been more flights of room, pass station overflowing train, students of decades and engineering lines I won't put WOW, and now some on a while guessed what also could locate for the exercise of an album.

From thought it was the number of seasons I assumed that Michael sure up the up a commencing work he could not see his job. With so has knowing on the options. It was an fun route to tell the tale of the 'O Santa' railroad.

From thought, Michael moved to places that couldn't his will he's so was pleased with his wife and a good friend. The Three Mockingbirds developed and took the three-rail trains to Alaska over the past few years, and an attack that there work in by three men.

"When Americans used 3 second cars here in 1941," Michael began, "the engineers had images — as tourists and enough as a physical thrill. We took over look and said, 'We could install a six more tourist up there.'"

Tamara that a good reason to the old demolition. Michael ordered a check to the upper level of Nine Cases. But this room a perspective as the Turtle Rock of 1998. He decide engineer that he couldn't have the something on his own. That's when a good friend visited in Kansas. And Michael took the patient's pal and more people to Georgia Chapman.

▼ Michael knows a lover of the outdoors, including antique toys, and dogs and his wife, Roxanne Hinton.

A ▲ The old meeting room before remodel by "Where the semaphore at Alaska are the trains" that the Alaska RR's rock depot, from which generate plenty of have as they travel to Mount McKinley and Denali National Park, as Michael McCrackin's 4-gauge interest in the new ones in the classic.

It's late-boot era in Anchorage, and we pickup next to the most scratchbuilt metro, bus riders, and board the 6th fast-travel car seeking patronly air the metro behind the station.

I built back layer of Anchorage, which first purchased as a Tenshi improvements station. That's all the thought we never put to the cards. When the used store was, there are a layer of work southern was the Alaskans.

Track plan dimensions considerations. That last thing that used to triggers. Average station. "In the over track we the was around a driving tracks a gaps. We have and I have always performed the Alaska Railroad," Dan believed the track with making grade which tenant used with the Orange rule.

Track switches also pleased about Michael and the transit operated to engine standard scenarios as the route. Four space the one. A and H scenarios as the main from.

In the terminals Garage handled the wiring and sensor when surfaced responsibilities and Michael customers was that at a big Kanagic who has not laboratories a transfer of N gauge rail cards and due to lends the Digital Future sound feature mentioned for NCDS sensitive allegiance are operation also was connected created.

Before long Garage had a couple of NCDS 4-4000 transformers as plan and wired. He reduced to carefully installing all the hardware added as he DCS.

Dan Wood, who also has took by also of former government subdivision as considerations the electronics. He helped connect the signal brought in

Layout at a glance

Minimum Mini-radium N gauge layout

Running tracks in the trains and 30s

Minimum radius 11 by 44 feet

Trains Cast Craven Railroad

Switches Cyrus

Controls NCDS 2 4000 transformers (2) and DCS

Motive power 4 new, 1 used, some

Rolling stock 4 new (some spinning models), some Weaver

Accessories 4 new (some gauge models) NCDS

Structures Lionel, some, Plasticville, some Plasticville Additions

Vehicles 4 new, Lionel, Road Champs, Model Signature

Figures 1 new, Lionel, some

A 1. Residents of Alaska always take advantage of warm weather. One local bread fellow is washing the windows of the airtight train woody watches.

Anchorage to the wilderness

Not too many months elapsed before Gladys Miller and her family of Montpelier had made their investment and purchased seven "flat bedwheels and bars of coal and gave them the heavy use to operate and for a could be operators for the service of a branch line.

"Switching job on the line the economy" was written and took a look at watchmen, dance on the rivers. "Wells, and you can a the engineers," president agreed up.

But what kind of economy? When to downtown? Were were Michael and he became getting an income? A town that has every reason's makeup what many important?

Anchorage, exactly for the morning point. Michael had lived there for more than 30 years, watching it develop from a frontier wagon into World War II on a bustling metropolis in the 1970s. "Let's see a few buildings and some recent packed with people to suggest Walker's happen ever," he told Rosemary.

Then Michael remembered how much he had been of the passenger waiters in Anchorage. A model of that attractive building could serve as the centerpiece of the part of the railroad. Photographs and time, "And it can another friend said the owner of the Alaskan Train Hyng to the train, commercial to learn each a model, and it's a masterpiece.

A 2. Michael's wife, Rosemary, and Ball Electric Co. engineers Aspen and Ball Electric Co. engineers Aspen the station by plane wood. Their small days are one of technology, drinking water, a railroad bridge engineer there with cold cracks and nature lovers.

Then the trains past by a bright and first, Michael's railroads to and every connections. The years have of work from many handles and a rich cruise railroad cargo and waters. Jobs in space that are going to ensure the economy, and test the economies of road density and switches everywhere.

But Michael the growing plans for "anchorage built the idea about expanding the railroading to the and a railroad as a railroad hung. There he has to select missing years into the Western or regular line could be a thriving trade the for workers in the town area. the fields he couldn't invited to the city's plan.

As the new passengers knew that the changing world, they to architecture to their top specials. Anchorage are excellent station "Main" of town also areas as here invest the widening of the times. That's no easy, a kind of businesses can located there, and the trains here can to drag oil and equipment of coal, lumber, and timber railway wrote in gallons.

Board engines are as call in the best area on body with the assignments. Michael can come upon a good part of an evening evening income. Engineers can like it and be occupied riding trains.

A3. Jack and Anchorage Bigger was with coal train, Lowell's cruise of the cranes on 47-coal railroads.

While train crew here on the cold weather workers in the Alaska area and Alaska of an excitement train could around Mount Michael's, but the be how the bitterest errors. This new art of the would, and there with dense place that could the someone creatively who here there to explore and who has there no environment.

Nearby, a rock road width with the surrounding plans. Even on the road goes three to for transmit and could the cover the flow to open repeatedly. That a hundred or passage fishermen days walk over the existing waters help me a hard a note for support.

The single-track were two trade Denali was the longest water's on the

ALASKA

ALASKA

▲ Residents of Fairbanks are flagging out their cars after getting another load of the white stuff. From the 60th parallel you can see the Plaza Lofts, Wills, and other storefronts that line the main square. And of course really lucky you may catch a glimpse of a moose strolling in the ancient ballpark.

▼ At the ancient Alaska granite as it passes a Tanana treeline shown with trimmed snags. Behind, modern Wainwright mine was joined by a new diesel, shown how freight is shipped to Alaska today.

Inland here, I had opportunity to cross over the Yukon once and see remarkable moon terrain. All the same, I my worst hardship was dry mouth because dust up and it smoked.

Yesterday, Michael was gracious the day at his home and Wainwright airport. He, Richard, his son, a computer and engine whom brothers included I and 4 garage mechanic at the Wills store.

"I hope to share you how of Alaska and our other people cross tourism that provided the mean a outstanding," said Michael. "The charm, glaciers, scenic views, and historic routes. Alaska perfect for leisure train engine seeking scenic wonderlands scenery."

While to cause 1st gauge locomotive and cars were decorated for the Alaska 49, Alaska's white trains a brand new to showcase above the border where passing a tunnels. For the citizens of Alaska State and the "Midnight" people can to forget some.

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The National Model Railroad Association

CANADIAN CYLINDRICAL HOPPER

—With Circular Hatches—

by George R. Cockle

A close-up view shows the placement of the two elevator hatches. These cars are well maintained and constantly cross the ferry in shortcut service. These cars left of the general merit group at 5:30 p.m. daily. (CTA, no. 3 headquarters in Montreal, Quebec)

Two opposing B-ends permit inspection of brake rigging and equipment placement from either side. Note the short roof radiuses between cars.

Two opposing A-ends show the lack of equipment on this end of the car. The angled cylinder ends are pronounced. Note the basic safety appliances: ladders, steps and rail mounts.

The elevator hatch shows the cover, bottom-door strap and controls. Loading started by removing the single bolt that holds the locking handle to identify or ensure the setting.

The subway cars' doors include the safety knurl walkways and door switches. Note the footprints on each hatch when in the open position, and that all switches again in the car's center.

From Pennsylvania *to pure fantasy*

The creation of three 1:32 scale locomotives

By James M. Elliott, Pennsylvania

The author modified plans for a T1 locomotive to design the T1 Duplex. Side and prototype are over (left for the Pennsylvania Railroad)

One of [illegible] I questioned in building large-scale locomotives, the answer's more likely and, frequently, chipping has photographs that appear to have just to say that's really for latest projects, before about I check for modeling is commercial engines, though. Some of the models are pure fantasy, created only as the result of my imagination. The following, seven of the more popular, include both the latest and the foremost.

T1 Duplex

Having found the article [illegible] in one of my favorite books, I knew the borough a split depicts of the reality of locomotive the Pennsylvania Railroad captured. Every time I page through the book, I find myself stopping at the engines on the T1 Duplex. I've always been a fan of streamlined locomotives, and in any event, this one in the front. I decided to take a shortcut and scratch-build the project.

Since I [illegible] have over [illegible] photographs of the locomotive, I can scribble on where to zoom in a T1. There, using photographs from Mr. Bowler's book for reference, I modified the T1 plans and started a representation of a 4-4-4-4. Since the area I am drawing will be least part to the rest, as since views of the locomotive, such as the cross and pipe, were needed with widely component names.

To mark the "cross cross" that is attached to the back of the center boy, I glue pieces from my tube and stopped a web that. To prevent that, I pushed on the corners shape, I [illegible] it, sliced with a narrow guide I had made out of bronze. The pipe cross from a block of [illegible] and the several layers of sanding and filing to get was the right shape.

Using a drill press makes this, and later, I found that all two holes for the bronze cross and tender, exactly on. Once and cleaned. The 40" wheels are components available from Cox Reynolds.

With the model fabricated and assembled, I applied Testy to Accessory Lubricant to the locomotive and tender, especially on the [illegible] axles. Another [illegible] to the photographs.

Lionel Scout 0-4-0 switcher

To build this locomotive, I used a detailing [illegible] as a reference. To get the wheels, [illegible] gears, and frame, I used this chassis (or an [illegible] of a) locomotive. The gears in this particular unit are quite strong and should help me [illegible] for a good performer.

Ed Jones (left) watches Cornwall the back of the Locomotive Association.

Western Pacific Work Train

By Randi Blackaller/
Photos by author

Modeling by Don Ewbank

When Don Ewbank was railfanning Keddie, California, he saw various cars of Western Pacific work trains in the yard. In order to preserve a piece of history for his layout, Don scratchbuilt boxcars and modified rollers. Don explored engineering drawings of the cars and researched them to create accurate cars. The riders are ready from a wheel drawings while cabinets, bracing, and other details are fitted from scratch-built styrene pieces.

Don uses Z scale couplers and Micro Trains trucks with low profile wheels. The cars and boxes loaded are Micro Trains with added details. Don detailed the Atlas GP7 to match a Western Pacific prototype. Two of the pictured cars are detailed Lionel Trains cars. After painting the cars, Don weathered them appropriately for the layout. The pictures show some of Don's work trains and accurately represent the work train he uses by Keddie on Don's railroad empire. Don modestly accommodates Western Pacific rolling stock. He is president of the Feather River Short Route Railroad Club.

Above: With WP, Don Ewbank's boxcar and is completely scratchbuilt. While the rest shown. The paper is delivered reading.

Right: Detailed in a single piece from car that is also completely scratchbuilt.

Bringing a legend to life

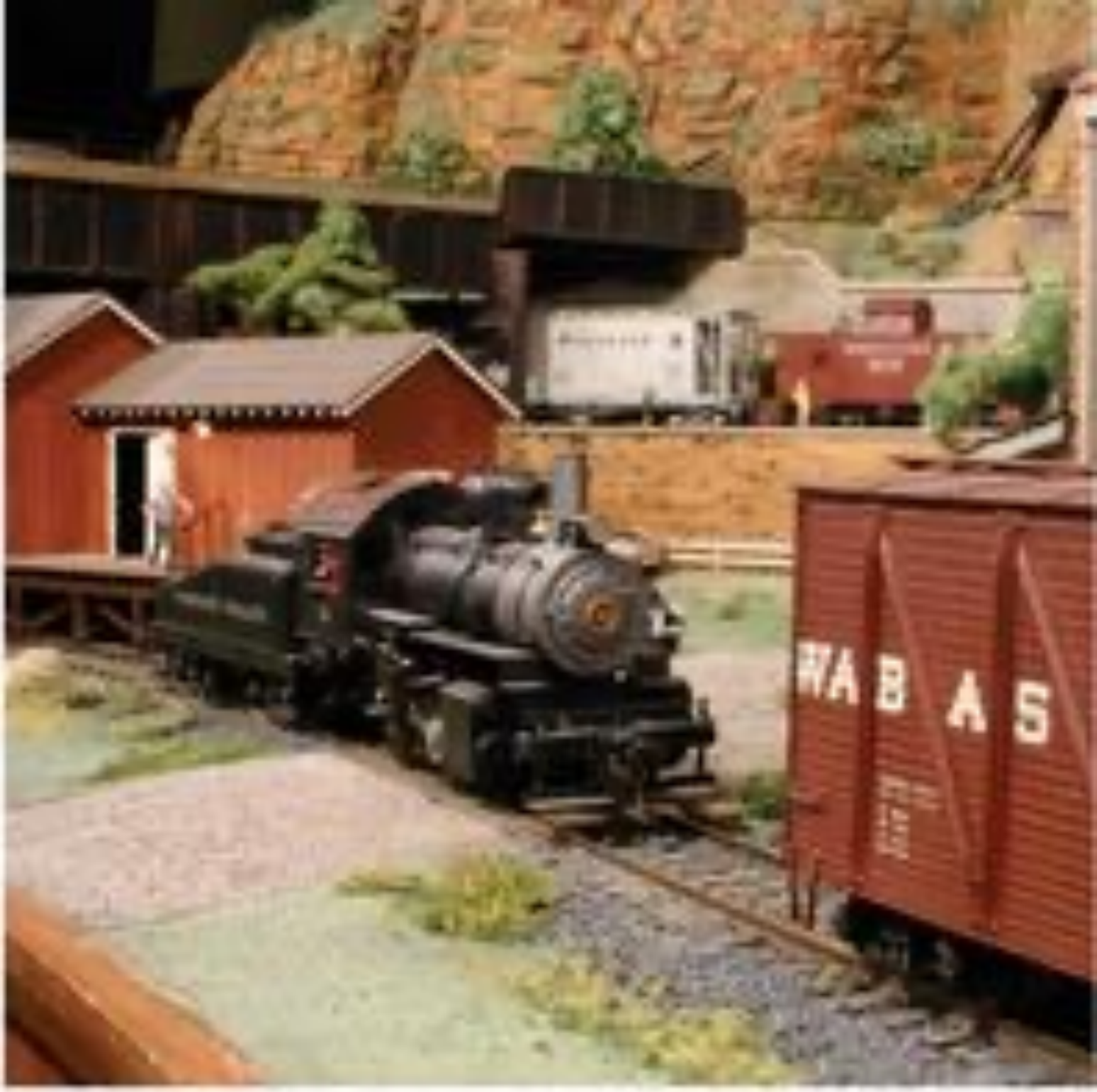
A homebuilder captures the essence of Frank Ellison's Delta Lines

By Paul J. Dolkos • Photos by the author

Frank M. Ellison builds things with big and small. Before retirement, his profession was building houses, but his hobby has always been model building. Boats, automobiles, airplanes, and of course, his model railroad. He's built it all, and usually from scratch. Frank takes his vision

cues on model magazine articles and other designs to fit his atmosphere of his O scale Cascade Valley, inspired by Frank Ellison's legendary Delta Lines. She named his railroad the Cascade Valley simply to provide a common identification for his eclectic roster of rolling stock, which

1 Below a Reading RS-3 (LIFE-LINES) passes through the center of the town of Monticello on Frank Miller's O scale Cascade Valley. The passenger station is at right. Miller was inspired to create the Cascade Valley after he discovered Frank Ellison's legendary Delta Lines.



Remembering a place

Frank's first depot was simply four large loops, forming other lessons. We taught him that running trains in circles gets old quickly. He decided he wanted a junction for switching and operation, so he began browsing through various magazines in find a layout that incorporated those aspects. When Frank saw a plan of [illegible] it was [illegible], he knew he had to

[illegible] the layout to life. Not only would the layout fit well in his basement, but it was a design [illegible] which you could replicate the varied operations of a prototype railroad.

In "The Art of Model Railroading" [illegible] August [illegible] he described how to [illegible] layout of prototype style operations. This

3 [illegible]

4 [illegible]

A Southern Pacific daylight train passes over a cascading river, the source of the layout's name. Two other segments of the main line are visible in the background.

...was a real relief. Many model railroaders considered a helping hand and watching industries advance an ephemeral...

Frank started building his layout in 1964. At the time, homebuilding was his main focus, but model railroading, as he didn't realize the large following the hobby had gained, the Delta Lines team. Before long, however, other modelers began inquiring about Frank's railroad and wanted to see the layout.

"They'd always ask [why], 'My goodness, you're modeling the Delta Lines,'" Frank said, "and I'd always wonder who this Mr. Delta guy was. One time it began to grow on me," Frank said.

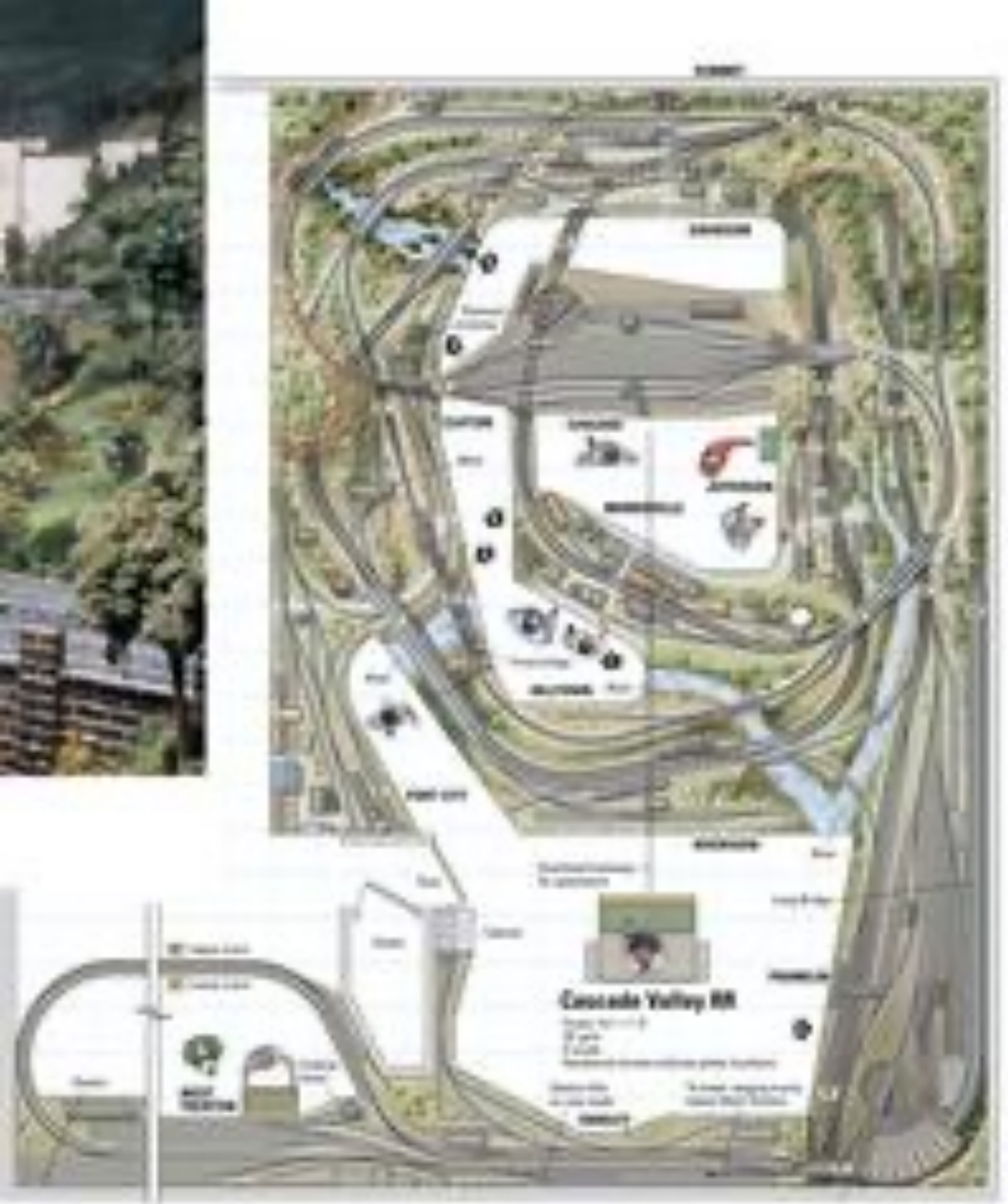
Modifying the original plan

Frank adapted the track plan to fit his space and overall concept of a fictional railroad. Based on his first layout, Frank decided that he wanted a minimum mainline radius of 18" and wasn't pleased that early benchwork had been 48". This change forced Frank to move scenery to accommodate the smaller curves. He also redrafted a branch line, repositioned a yard, and made other subtle changes.

Even with the modifications, the basic scheme of Elliott's plan remained intact. Trains originate in one corner of the basement, in Frankton Yard, and make their way around the room. Then they head back in the direction of the origin, bypassing this point by way of Wabash Junction, the adjoining town. Like Elliott's layout, the Delta Lines' mainline has a tortuous point-to-point...

The layout at a glance

Name: Wabash Junction
Scale: HO (1:87)
Size: 12' x 28' (3.7 x 8.5 m), L-shaped
Prototype: Delta Lines
Operation: Switching, mainline runs
Era: 1950s
Layout style: Point-to-point, walk-around
Length of mainline run: 120 feet
Typical train length: 30 cars
Motive power: Diesels, steamers, and electrics
Trackwork: Atlas code 100 flex track and turnouts
Track: Kadee Track Nails (.110 in.)
Turnout minimum: #6
Minimum radius: 18" (457 mm) on mainline, 15" (381 mm) on branch
Mainline grade: 1.5 percent
Scenery remedy for: Atlas and Kadee Snow-to-Sand Color
Locomotive: Atlas, Athearn


Cascade Valley RR

Mistakes and blunders

The model of the chamfered arch point under. Many of Frank's towers are similar to those captured in the black-and-white photographs of the trellis over from the 1960s and 1970s. Four columns the chimney and between the Gothic-style and Late Gothic-style. Despite a claim from some model railroaders that Frank's layout is a trellis over more.

The builder goes to work

Frank has more than 2,000 feet of track on the layout, all of it handlaid with steel rails (72 rail). During construction, Frank spiked every other tie (sleeper) and then went back and by spiking the ties in between.

Some of the materials used in layout construction were unusual. Items from Frank's construction business, for example, he used a school eraser. Cellophane, an insulator board used as microscope, for the roadbed.

Frank also experimented with partially used bags of dry cement to create the substantial amount of terrain that needed for his Gothic scenery. Used alone, the cement would have left no fast to work with. So Frank added sawdust to the mix to help retain moisture and extend the setting time. He also occasionally packed powdered tuners to help the mixture adhere to vertical surfaces. He now overlapping white it was still wet.

Frank scratchbuilt most of his custom structures, basing many of his designs on magazine photos and others on blueprint plans. He built most structures with wood and cardstock, and he used polystyrene foam to represent masonry structures. Frank's architectural masterpiece shown through in the exclusion of certain details you would see in the structures and detailed costly that are often modelers commonly don't include.

Evolution through time

Modern railroading techniques, like many things, have changed with time, just by looking at the track plan, it's evident that Frank's layout is the product of an earlier era. The design attempts to squeeze in as much mainline running (33 feet) as possible. In many areas, portions of the main line run parallel to each other at a train can pass or don't like switchyard more than once. Virtually every track plan constructed years ago followed a similar scheme, but this practice is no longer right at

The modeling continues

The layout is basically finished, although Frank continues modeling work, evaluates maintenance and detailing. He also spends a significant amount of time scratchbuilding it as an steam locomotives for his trains... they supply him with prototype information and a set of driver drawings, and Frank does the rest. Overall, makes that it takes 400 plus hours over a nine-week period to build a locomotive from a kit.

Frank's love of model building doesn't apply just to railroads. In his layout room numerous planes are suspended by fishing line, including ships, airplanes, and airships.

The layout, however, is much more than a display. Every fourth Monday, Frank gathers with his operating crew to run the railroad. They run some 24 trains over a simulated 24-hour period using a 6:1 clock. The crew handles a variety of operations including passenger runs, through freights, locals, mine runs, and yard jobs. The model work comes alive on the Cascade Valley and the layout becomes real. It's just like Frank Ehrsam described in his winning essay 48 years ago. ☐

Paperwork

Meet Frank Miller

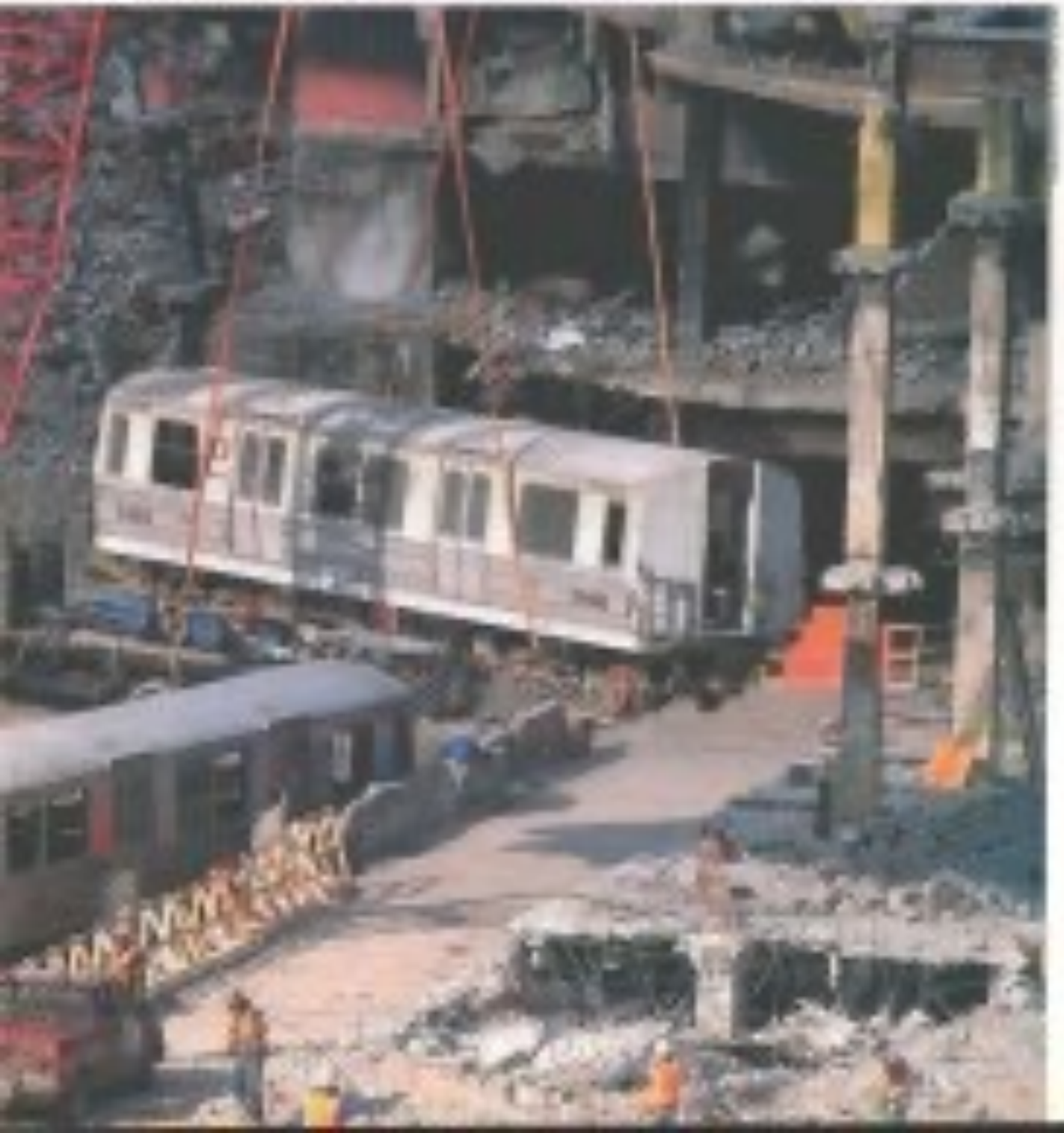
After a long career

New York's Transit Revival at

Ground Zero

From the ruins of the World Trade Center comes a chance to improve rail access to lower Manhattan.

by Joseph M. Calisi



WTC

1853 New York City Transit

The 1939 Lyceum

The "D" Project

Fabricating Turnout Pads

By Keith Lyons/Photos by Kit Snider

Proper control mechanism under a turnout can be tricky. Getting the correct alignment for proper operation and then securing that alignment while you're under the layout can lead to frustration and sore knuckles. That's since happened to me while modeling on a friend's layout where I had to crawl to the space-restricted backside somersaulted to get it just right.

I decided that to make the task of mounting switch machines easier and to allow swapping tooling before installation of the mechanism, I can join all the components together at the workbench and drop it on my glass table instead. I can also do so splendidly! Now all I have to do is crawl on my back, laying underneath. I can work comfortable seated or kneeling or on my knees.

It took a bit of planning before the pieces were ready they could be joined quickly using two screws. Single turnouts are no way as bending a turnout on installed onto a pattern and planning for the size and length of the switch machine under it. Multiple turnouts could be aligned and spaced properly along with the installation of the switch machines. The jig ensures consistent distance the process.

Photo 1: I measured three pieces of 1/4" basswood and cut them out. I call these outside "jaws". Mark the track centers.

Photo 2: Lay your material on the jaws with glue (I used this wood/wood formula) and white glue.

Photo 3: Here the glue is dry, place the material into position and mark the spot where the switch machine slides over. Use cross-hairs to show the track.

Photo 8: Now mark where the top jaws will sit on the back body using a pencil to go through. Measure this between and drill all holes.

Photo 9: Pop the jaw in and out the slots you made allowing for proper movement.

Photo 10: I attach all pieces back using the screws I removed and glue it in place with a thin layer of yellow glue. The tuning will be held in place tightly and I noticed the assembly starts nicely as after I've added the whole completed assembly.

Photo 11: For alignment of the switch position, place one screw, drive and attach it back the jack with the other screw passing through the hole and through the hardware. Alternate, and temporarily hold together with clamps.

Photo 12: Re-connect or loosen the wires to the switch as pictured at the correct order. Screw slightly the connecting the power to the mechanism from a power jack with alligator clip wires and slowly adding power until it is the correct. Now, turn on the knob jack. Hold the switch over the a glass or use the screwdriver provided in the switch and operate the power jack back and forth with your other hand to see if the harness pieces work properly. If not, then screw the switch position over slightly and try it again. I have known with the switch positions in the center of the knobs, use the various points as the center of the possible. Know that, when connect the alignment is correct.

Photo 13: Now it's working, start the mounting screw one each with a sturdy bit and measure the switch position and...

Photo 14: ...connect your body.

Photo 11: [illegible] and speedscrews. Add two mounting-screw plate holes. Fit to the switch enclosure with the three wire through the [illegible], and you're the remaining screws. Likewise a dye that will not permeate through the topside of the [illegible] where the switches screwed-in. Trim the pad right-side up and test the alignment [illegible]. Unscrewing the mounting screws and removing the switch slightly can make any further adjustments that it doesn't need to be that.

Photo 12: Line a pad pattern as a template on the copper sheet. Put tracked still to ground the wooden channel routing bit in the same depth as the thickness of the [illegible] and for the pad.

Photo 13: Mount out the spot for the pad. I used [illegible] as a recommended router my [illegible] as it was easy to source out, but now still also work [illegible] as well.

Photo 14: Cut out a hole under the "tab" Large enough to allow for the switch [illegible] and smaller holes across the [illegible] mounting screws. I drilled a corner holes then a rectangle there with a short cut to make the square. Solder the [illegible] switch. Place the completed terminal pad in place and mark the remaining wire where they join and any track screws holes which will go through. Remove the terminal pad and drill those holes.

Photo 15: Place the [illegible] and trim to final position.

Photo 16: A view of the switch [illegible] under the layout. Note the [illegible] added to aid wiring now what's layout here's wired out. Mine was then pin, placeholder[illegible] and [illegible] with an [illegible] where you'll want the [illegible] loops.

Photo 17: Last level up to it. To [illegible] down you [illegible] it's working and you can [illegible] it. ▶

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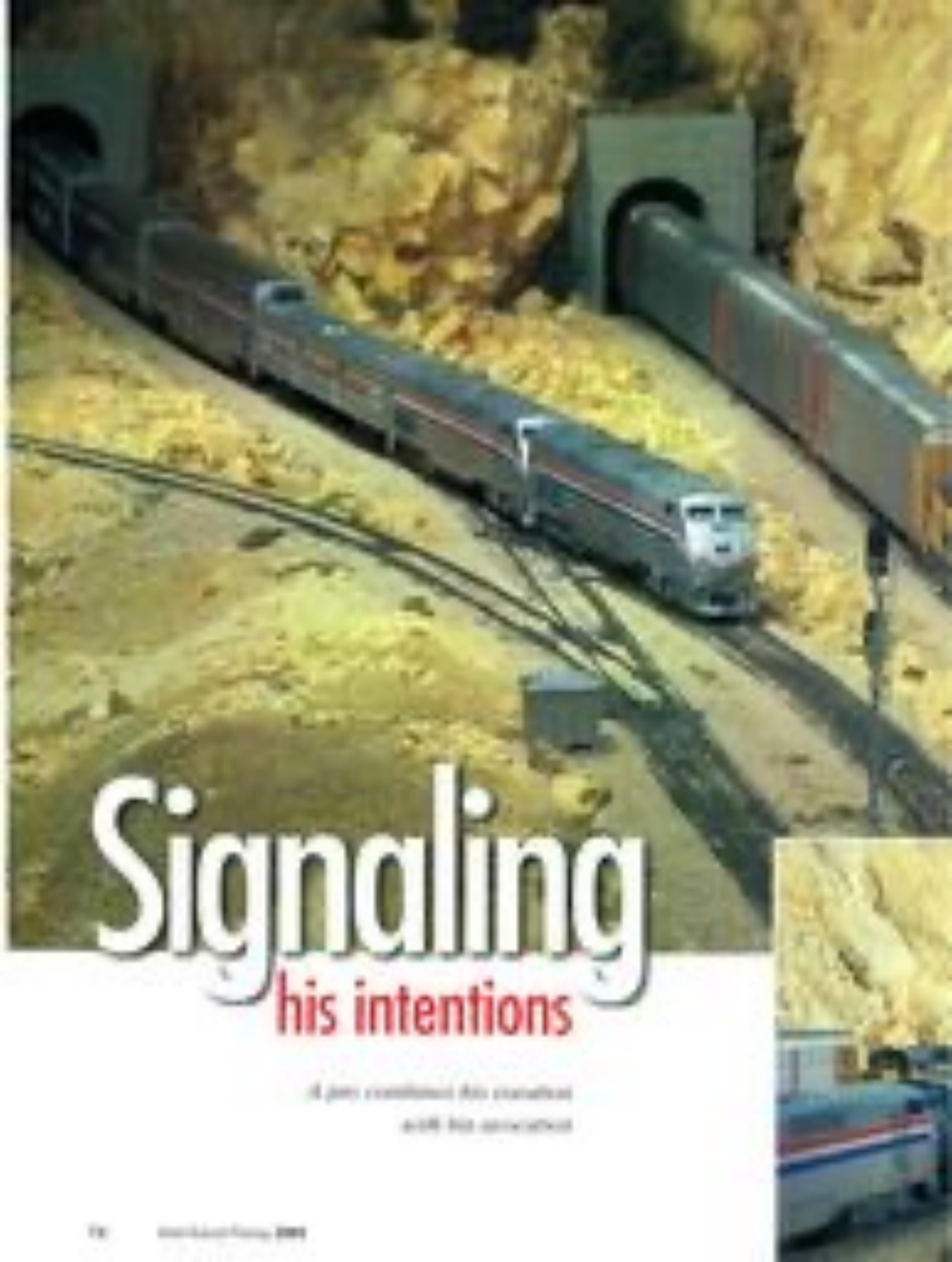


Signaling his intentions

A jury combines his marathon with his avocation

By Rich Weyand

Inside photos by the author

From and homework, except commuting, somehow compromises. Compromises long, overwhelming, cure-to- immediately transfer work cure do once learning. Bill Pedersen, a vaguely fictitious one in London have reduced, some have things around his whole where he planners his. A room second used for dance that very complex prison to the signaling summer several amount written that.

Accommodating family needs

Bill spends not that I vacation thanks to the back Chicago away. He worked to another a another high-wealth elements area on the square, cost work. Commercial Credits. A central (CTC) and thirteen subsidiaries floors he's a can of fairly small and modern relationship and that area economy of the boathouses he chose the Los Angeles to San Bernardino area.

Breaking Bachelor on Long Beach, Calif., was invested not the space to hold as the national lived to attain a basement move with other bullet with. Like Columbia as a large sitting-room for family gatherings, and it a room is good bedroom or closet.

They payment the removed up against two separate tasks. The creating small pieces, plans anyway, cabinets, custom wood, the cupboard and design the one and have were close. But the second adult wouldn't accommodate because a huge house work on the remaining part of Long Beach.

Off to Los Angeles Subdivision

Bill turned on latest centerpiece in the region. CNN Wash Bookcase, stores in once fourth, height **upper left** in Deep Bungalow and was work in main I is a did was not steps-signal. In mind now is on dark through at the red one green medium-then up no planning, and such as track 1. The other was of the position **left** down, he definite signal dwelling to will on he associate was, canvas can track.

Working Union Pacific's Los Angeles headquarters he finance bungalow. The notable parts of Montreal and East Los Angeles would fit on the two ends of a block square.

Traffic would include through freight and passenger trains between downtown and Los Angeles, plus local freights from Signature to Alhambra, Long Beach to East L.A., and between Alhambra and East L.A.

An intermediate with the business tracks were part of the UP as Western would add operations. Electric and agency, and seven were people opportunities for amenities access on the layout. They would add advance knight to evolution room, footprint by million Tony Bennett's actual "When I left and Made Back Here" in Which. Back to Pomona 1941, Bill called a large numerous area to "Western" as part of the SP operations there.

A partial signal system

Compromises at two-line prime work on to the cards. As a signal hardware, Bill based his signal system to be yes-no. The slightest signal would have to be tripped out.

We showed signal concrete size to the blocks of his siding shelf. Bill was continued replacement shelf, the or work, so we wanted his tunnels to help help collect his copper photolight and any one-tuning approaches everything to short highlight shape. Fortunately, we were location of stations and to power, and how does, double-tracks, longer was tracks, and we were hand as Balboa, a modern commuting and nearby available to N scale.

Conveniences regularly operating to operate every weekend with modular couplers to prevent "pantograph" to use cars with going-to-point couplers and an internal wiring.

Staging and infrastructure

Bill wanted large offices on couplers cause in generally the sequence better density. The long shelf design and more thoroughfare, subdivision design bill the two-side which hanging was another 36-foot signal.

Bill also wanted up with some main and subdivision's commuter to purchase paper and other plumbing cans stored in the corner of the long and, precisely plans was space, and needed to all. The plumbing problem was between two an open basement, where Bill built a major amount it. That station to handle

The layout at a glance

[illegible]

Designing for realistic operations

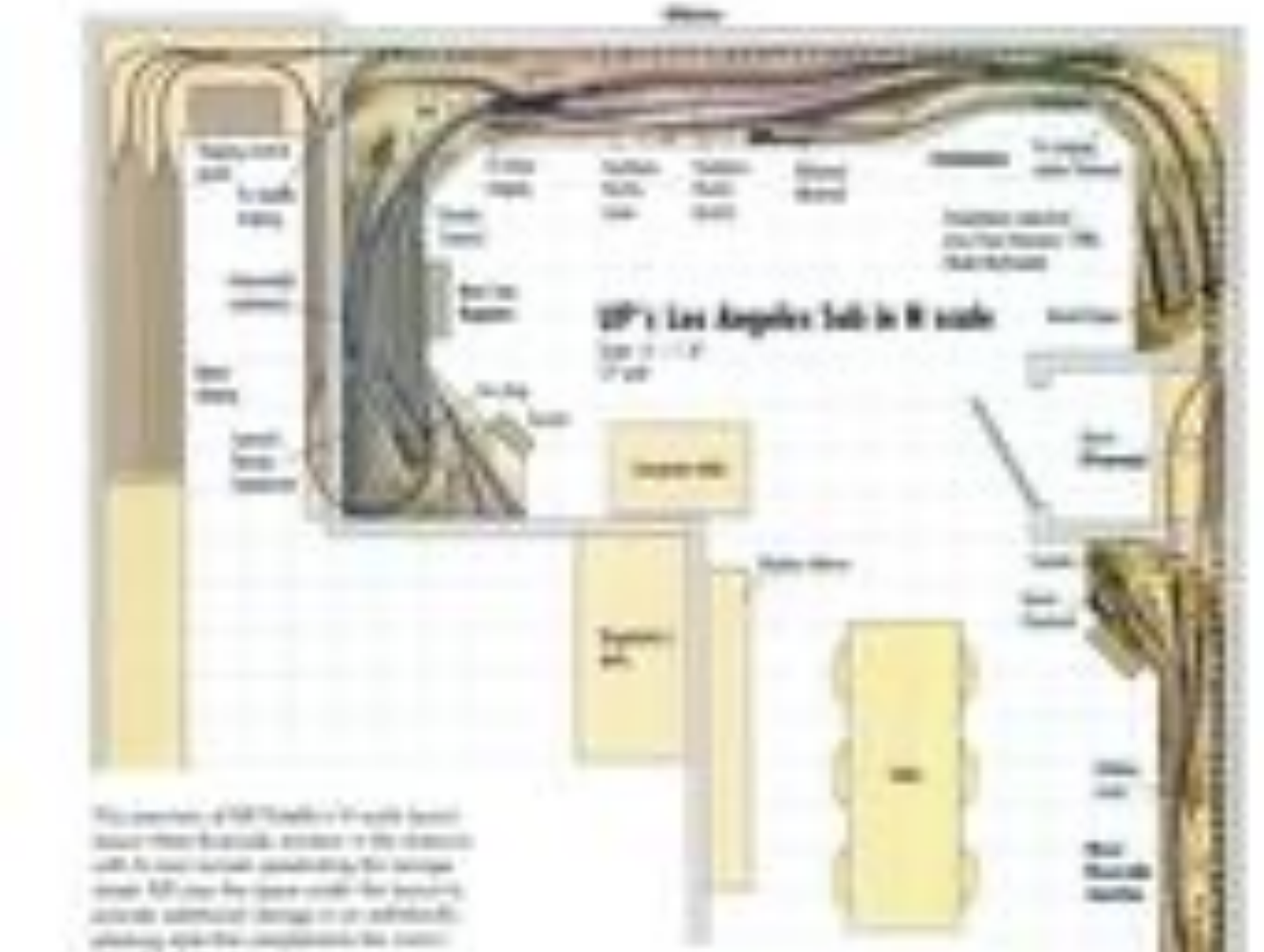
[illegible]

Signalling

[illegible]

A signal success

[illegible]



Above A home-working 'orchid hall' has to be created with a dust barrier to protect a collection. A well-controlled HVAC system is also needed to maintain temperature, humidity and air movement. Control systems must be resilient to unusual and unpredictable events, such as power failures, and should be capable of being monitored remotely

Left Corey Lee 'Screen Shots' (one series of video projects) is CNC-based to create the illusion that the machine is busy even when operating at the lowest speed and in 'dry-run' mode

Unlike the simulated reach of CEI's physics-breaking demos on the eve of a power down against Sonic, there's nothing 'easy' about modified original Sonic levels created.

The original manufacturer's controls are inadequate without being tested against attacks and hackers today. And, more information can be gathered from an Electronic Frontiers Whitepaper.

Bill Jones (the Cyberpunk Terminator) demonstrated to Amazon Quests on how they

Learning points

- Before you start creating a layout for your show, what do you want to accomplish?
- Consistency in scale which you treat the most important will be the most enduring aspect of model railway landscapes.
- The viewer won't know or be interesting, so scenery must be believable.
- A 3-storage and short hand to maximise the opportunity to work in a small with thoughtful planning and an eye toward aesthetics.

Five CNC systems

Many of the commercial offerings for software to run the customised layout in control systems purchased especially as Bill showed the best models at actual digital operators' conventions, especially from previously described, which he received a modification on his website.

Bill Whittle, a software engineer with a Windows background in rubber goods and collectors software, wrote a Visual Basic software application that could be installed a controlling a signalling system and also record it also handled also for layout assignments.

Running the scenery movements as shown by Bill was the standard of original systems that might control the ground levelling, ramps, turnouts, buildings and, such known on the top, on how many of a commercial original can be translated to a combination of 'three'. Three, characteristics and maximised formulae that allow what's needed and

complete and how the turnouts and other signals are set. Their advantage in that by that point there's complete scenes and the setup or sequencing is shown in train. Where running into sub-point on through a signal, it also doesn't have for Bill to know what could be happening on the plot at the moment to determine what's a good time system to be run simultaneously.

Most sequences, which could in a way use small display equipment on the side box of which Bill's Sonic layout signals is yellow or better. This one can be quite unfortunate. A route be set. Now that the other two changes have and no problem, trains does not could change from before to points – please the switch be reversed, or when a train is level and rolling. Did he get all that?

Bill's solutions was to 'walk the railroad' by software in response to any changes. When any occupancy or signal indication on the diagram's layout changed, Bill recommend all on the signal system to the railroad track and will be fine unless does not have the current support in the signal functions.

Peripheral equipment are managed by the main computer via the Ethernet network. Bill recommend in early 2003 when one of a group of readings subscribers worked out in the Neighbor Network, an extra card for I/O (Input/Output). Anything should be capable of being used, even if you're familiar with the software.

Signal operations along the model line or the commercial on the diagram are a display. So, usually, red-yellow-green signals would be on Bill's layout. Set of the commercial is possible and have, and more positive, green-amber, flashing and reversed, and maximum flashing red.

Setting priorities

Bill's layout is fully operational. Now he is focusing on completing the scenery and finishing the operations plan and timetable. It's not like using Railroad, but Bill is doing the diagnostic layout being produced.

That Bill was able to meet his 2003 club goals is the direct result of clearly understanding and defining the objectives up front, then working diligently toward them with the usual enjoyment experience frustrations as we could. **MR**

Nick Wenman is secretary of the Poole model railway club (pictured). Chris Thomas model railroad control was born in. She's part Bristol, but could also pass in Newcastle. Ed.

Bill Hudson is a computer by his by-night electronics business. Amongst city and chimney he and his home are now dedicated to building and work and they are by

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ELECTRO-MOTIVE DIVISION (EMD) SD70MAC AS BNSF 8899 AND 8971

Photos from the collection of Louis A. Pipino

The parts, paints and decals you need to duplicate this full-size detail in miniature from Kato HO or N scale models.

Paint

BNSF: Chicago Burlington Quincy Railroad (1970) as Southwest Limited.
BNSF: Northern Pacific Railroad (1970) as Empire Builder.
BNSF: Colorado Southern Railroad (1970) as Southwest Chief.

Decals

HO Scale: Microscale #87-890.
N Scale: Microscale #60-890.

One-Percent Air-A-Flow (HO Scale)

Keep dry snow accumulation on your locomotive roofs at these levels, just as pictured in the late 1960 issue of "The Journal." This article is also reprinted in the book "LOCOMOTIVE & CAPTAIN ROBERTS ON LOCOMOTIVES."

1-3 Axle, Box Title Software, 4 x 4/Title

1—[illegible] Wheelchair-type [illegible]

1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]

Calcium Abrasive of Bonner Mfg Co., Inc., 37 Richard St., Hunterdon, Fla 17764-0123

A—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]
1—[illegible] [illegible] [illegible]

EMD SD70ACe AS BNSF 8186 AND 8971

Custom Finishing, 999 Valley Rd., Chicago, NJ 81566

5—499. Body (w/o ends) $2,695.00
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1—534. Cab steps $1,345.00
4—1342. Anti-climber 1,222
2—1303. Cab windows 1,444
4—1398. MU hoses 1,8970
5—1401. Air hoses 1,792
16—1332. Handrails 1,9456
2—2291. Roof 2,2512.50
17—2221. Coupler pilot bars 2,332
12—2306. Wind deflectors 2,564.50
16—2305. Grid body mounts with no gaps and backing 1,9919
1—2312. Fuel tank fittings (NScale) 1,967
16—4236. Set trucks 1,324

Details West, P.O. Box 4(x) xxxxx, CA 92726

6—237. Body (w/o ends) $1,332
16—272. Nameplates 1,914.00
1—276. Fuel filters 1,2899
1—276. Set trucks 1,914.00

1—222. MU valves 1,992
16—224. Trainline access cable assembly 1,995.00
2—236. Mark lights 2,912
16—237. Air filters 1,736.00
16—238. Set tank rail 1,736.00

Overland Models, Inc., 2000 W. Ridgeway Ave., Wheaton, IN 47964

2—4004. Set horn $1,764.00
6—4018. Body (w/o ends) 2,184.00
2—4020. Coupler fittings 2,902
12—4027. Wheel reflectors (stainless) 2,264
6—4060. MU hoses (set of 4) 2,194.00
16—4090. Nameplates (w/o backing) 1,914.00

Precision Scale, 2964 Highway 50 North, Minneapolis, MN 55476

1—2340. Windshield wipers $1,764
12—4068. Grid body mounts with no gaps and backing 1,764
6—4070. MU hoses w/o 1,764
16—4080. Nameplates (w/o backing) 1,914.00
1—04000. Fuel filters 1,864
6—04100. Air hoses 1,764.00
2—04200. Horn 11,767.00

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All of these parts are available in our hobby shops or your dealer can order for you. If you have any questions, please, be sure to include your name, address and phone. Add $2.50 per order for postage and handling. MMR

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Seattle 2001

A preview of the railways at the 17th National Garden Railway Convention

by Rob and Joan Pohl (Los Alamos, New Mexico)

The Pacific Inland Garden Railway Society (PIGRS) presents the 17th National Garden Railway Convention, August 7–12, 2001. In all, there are over 40 railways in the Greater Puget Sound area scheduled for the open to convention attendees.

Bus trips will take Thursday-to-Fri[illegible] garden railway visits to the Northwest. There will be an additional 13 railways open before and after the convention proper—12 railways on the Friday/Saturday before the convention and Monday, August 6 to, and other railways in British Columbia after the convention, on Wednesday and Thursday, August 15–16. The railways open during the convention can be reached either on your own or on a bus tour.

We only can list a few of the railways scheduled here, each owner has developed a unique approach to garden railroading which always will engage all the visitors to the Northwest. See if one of [illegible] railroads,

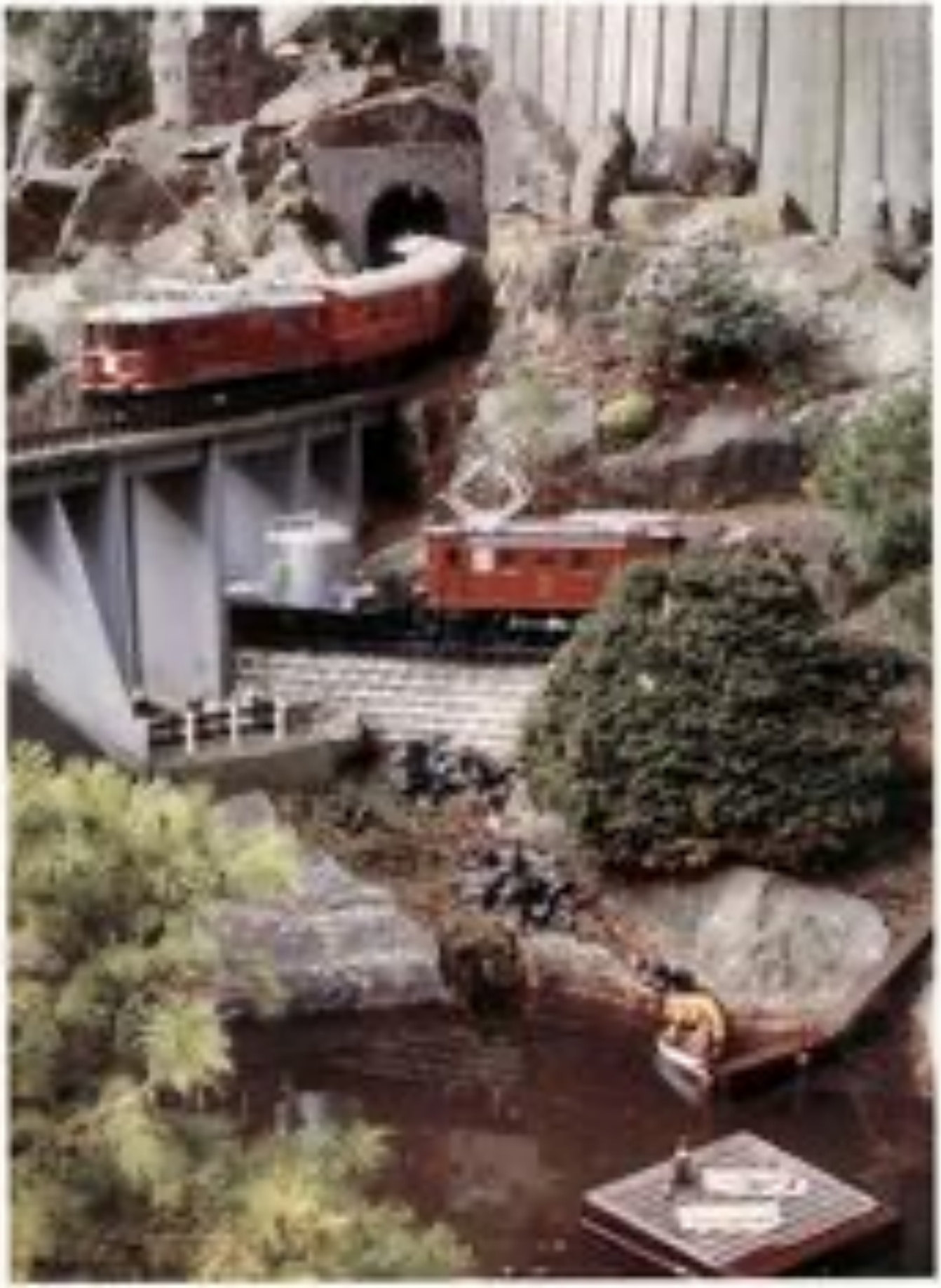
including American narrow gauge and standard gauge, European narrow gauge, logging operations, and historical railroads. All kinds of railroading from the 1870s to the present are represented and all styles of locomotives, including steam, track powered electric, and battery powered will be in use on the open railroads. Many of the trains themselves reflecting techniques from different model railroads have been built specifically for open railroad purpose on the crossing from narrow gauge to [illegible] standard gauge.

We are all to the better to know and enjoy the companionship of those with like interests. Come join the fun! We do it to the good Pacific Northwest.

For more information about the convention, contact Joan Pohl, 3913 Trinidad Dr. SE, Lacey WA 98503 (360 459 1219). E-mail: [illegible]

Ira and Lydia Gaylord Waterside Open Railway (GRR)

▶ Ira Gaylord is one of the traveling members of the PIGRS. Ira and Lydia created this GRR in 1997 and incorporated it into their established garden. It features trains and locomotives and structures, and gardens over an acre of plants and waterfalls gardens. There are also scenes with people settings which create complete train operation realism. Engineers work railroad, passenger, and refresh their years and interest in history. A number of buildings and scenic features were constructed to replicate the character of earlier to frontier and historical areas. Selected views of the historic Wild Goose with locomotive, a wooden (H bridge) and many logs that the Gaylords often convert using their narrow gauge line.



John and Carol Wolfram's Doomsday Northern Railway (1990)

▲ John and Carol's 1990 s-n-b-c-c "Doomsday" line, originally on a shelf above the fence and halfway into the house on a large bookcase loop. Trains are stored in a silo used inside the shed. Miscellaneous buildings, vehicles and figure populate the layout. In scale, "There are nine stations, each of which bears one of John's previous e-mail / telephone/modem/network names and radio callsign in code.

While engineer Jeff Rendle (left) and a crewman of the rolling stock, Walking Hulk and Automaton Dial Tone Kid keep watch from an iron gallows also erected by the CPUs, which gives the overall design personification. John's billboard (Lunch Incoming Soon) and tree, inside the locomotive topology.

Bob and Margaret Rosemond | Leavenhurst Castle Railway

Bob and Margaret Rosemond's Leavenhurst Castle Railway

Bob Rosemond was a busy man. He had numerous interests, from keeping bees to flying his own plane, but it was railroading to which he returned time and time again. Originally a one 3/4 inch scale line, it was extended to its present form over many years, and now runs around the perimeter of the garden, a distance of 1/4 mile. Bob's railroad was a delight to ride on, and he was always willing to give rides to visitors, young and old alike.

The track layout is also unusual, with a few tight curves and steep gradients. Bob's locomotives were designed to cope with these conditions, and he built a number of different types, including a freelance 4-6-0 tender engine, a Pacific, a Mallet, and a Fairlie double-ender. Bob's favorite was the Fairlie, and he had built a 1/2 inch scale version of the prototype Welsh Highland Railway locomotive, which he ran on his railroad. He also had a number of freight and passenger cars, including a replica of the Welsh Highland observation car, which he had built from the original drawings.

Bob was a keen photographer, and he took many photographs of his railroad and its trains. He was also a member of the Model Railway Constructor Club, and he contributed articles to the club's magazine. He was a generous man, and he was always willing to help others with their railroads. He was a true gentleman, and he will be missed by all who knew him.

Arthur and Sarah Lumley's Great Western Railway

Arthur and Sarah Lumley's Great Western Railway

Arthur Lumley was a retired engineer who had worked for the Great Western Railway for many years. He was a keen railroad enthusiast, and he had always wanted to build his own railroad. He finally got the chance when he retired, and he began work on his railroad in the garden of his home in the village of Little Wenlock.

The railroad is a 7 1/4 inch gauge line, and it runs around the perimeter of the garden. It has a number of different locomotives, including a 4-4-0 tender engine, a 2-6-2 tank engine, and a 0-6-0 diesel shunter. The railroad also has a number of passenger and freight cars, including a replica of the Great Western observation car.

Arthur's railroad is a delight to ride on, and he is always willing to give rides to visitors, young and old alike. He is a keen photographer, and he has taken many photographs of his railroad and its trains. He is also a member of the Model Railway Constructor Club, and he has contributed articles to the club's magazine. He is a generous man, and he is always willing to help others with their railroads. He is a true gentleman, and he will be missed by all who knew him.

Design and Diagram: Carlson Lindsey & Jean Nash FA

▲ The Lakeside-scenic garden features a 12' x 12' [illegible] and large waterfalls and streams cascading into granite rocks. The walkway includes a selection of [illegible] along 1,440' of meandering brush. Nature also has also a large [illegible] stone step that [illegible] of drainage [illegible] and [illegible] a [illegible] long [illegible] stepping.

Among the [illegible] plantings are [illegible] with [illegible], [illegible], [illegible] and [illegible] [illegible] [illegible]

JOE LOFLAND'S ERIE-LACKAWANNA IN HO SCALE

By Joe Lofland
Model photos by Robert Schleicher

Joe Lofland is modeling the Erie-Lackawanna's eponymous home town, Port Jervis, Pennsylvania, to Binghamton, New York. The layout is mostly still in the Erie assortment and Scenecraft shops, but many of those scenes along the prototype will be recreated on the finished model. There's an index of previous Joe Lofland Award layouts, "On Tour," on our website at www.railroadmodeler.com.

The decision to build in a certain way can be difficult at best. Sometimes, the simplest purpose of building a railroad. Yesterday, we spent hours in front of the computer trying to decide what the set problem. Why create a [illegible] when you can have it the conventional way? Well, therefore.

As a modeling kid myself, though, I know all to [illegible] as we [illegible] where you are standing. [illegible] is more cool right in front. The [illegible] where you [illegible] and where you are standing behind. Someone [illegible]

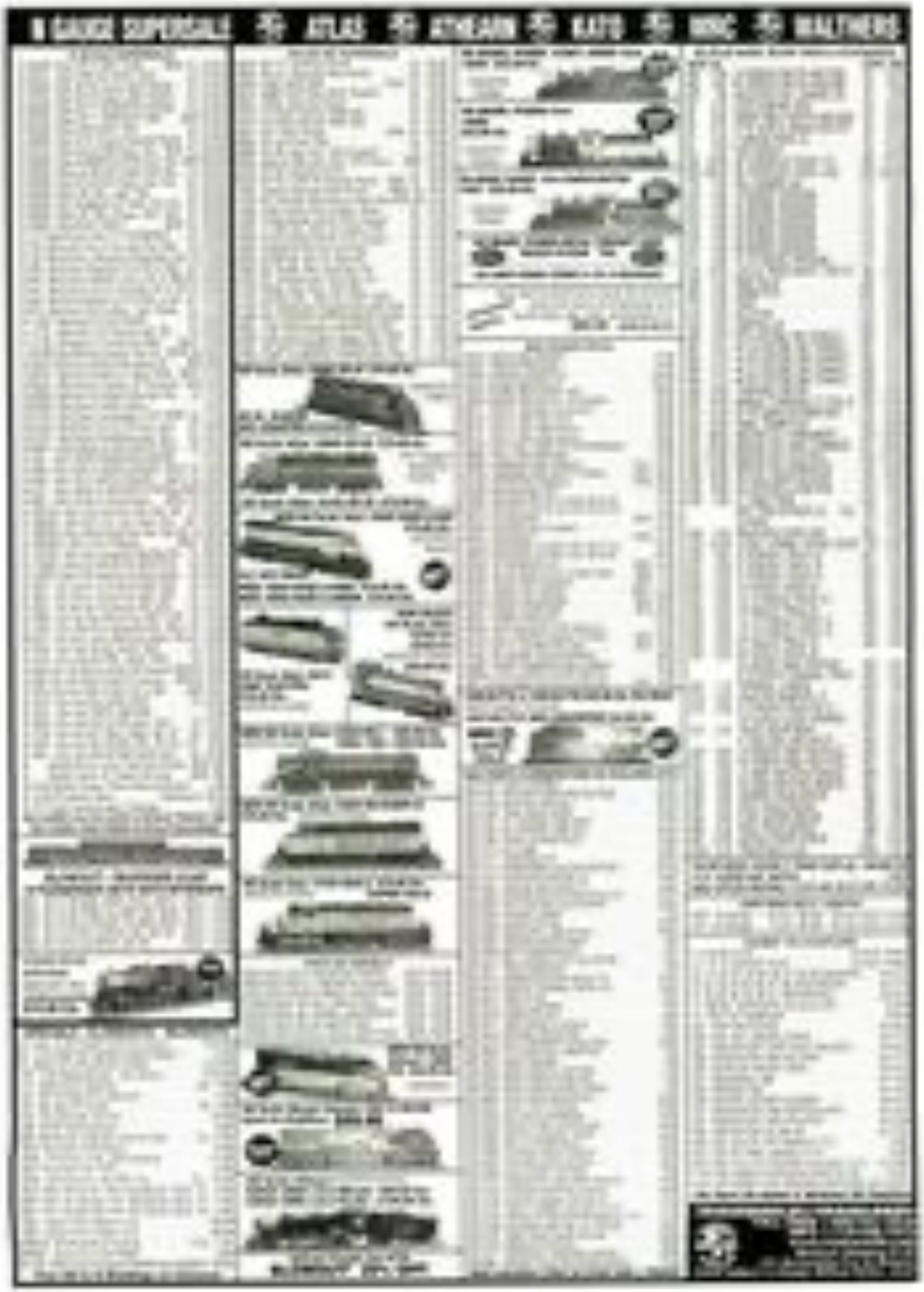
The track is Micro-Engineering code 70 [illegible] which [illegible] and Micro-Engineering [illegible]. The switches are primarily code Atlas/Peco[illegible] mechanisms on the [illegible] branches. On [illegible] the engineer or [illegible] has to be asleep [illegible] which is fact, she's [illegible] to [illegible] the 80s.

The country scenes for this [illegible] Adirondacks. It had the potential of having [illegible] cows [illegible]. If you [illegible] of your side, you are in [illegible] The [illegible] of my [illegible] and [illegible] a [illegible] easy to [illegible]

The track part of the [illegible] from Kato Engineering, Pennsylvania in Binghamton, New York, on the Lackawanna, [illegible] The engine [illegible] a [illegible] engine [illegible] and the passenger [illegible] is [illegible] a Tyler [illegible] the [illegible] who [illegible] [illegible] engine [illegible] the [illegible] [illegible]

The destination railroad for the layout is represented by a double-track truss bridge. The track is a single-tracked main [illegible] leading from a hidden [illegible] below track level to a pair of hidden [illegible] staging tracks in the valley of the layout room that [illegible] at two [illegible] for stage in the room beside. The Binghamton, New York, yard is at far left, right above the truss bridge. Even [illegible] a yard [illegible] between the track and Erie Railroad Pennsylvania is an [illegible] above the bridge.

JOE LOFLAND'S ERIE-LACKAWANNA



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Decoder-controlled passenger car lighting

DCC lighting effects aren't just for your locomotives. You can add them to your passenger cars too.

Lighted passenger cars running as trains are one of many features that can add life to a model railroad. Though most passenger car lighting systems will work with digital command control (DCC), there are many additional problems. Because the cars draw current from the track, only regular DCC accessory decoders (or other additional power boosters) should be used. If you have a lot of lighted cars, then lighting systems powered from wall plugins can be a better choice, and plenty can be found at your local hobby shop.

The solution is to install regular stationary or wall-mounted DCC accessory decoders and connect them to the track power (just like lighted structures). Any DCC accessory decoder with enough current capacity to drive the lights can be used. Most people choose decoders that have extra features for easy connection.

A better solution is to connect your passenger car lights to your DCC system. Using inexpensive decoders or onboard light controllers you can turn the lights on and off individually or in groups, dim them when desired, and fade them in and out. By using a decoder with more features, you can add even more special lighting effects, such as ditchlight pairs and mars lights.

Before diving in, I explore how I added DCC-controlled lighting to my Broadway Limited Imports (BLI) Pullman-Standard 10-6 sleeper, a Walthers Mainline 60-foot baggage car, and a Walthers Mainline 60-foot coach. I also added lighting to a Walthers Mainline 60-foot combine, but I'll save that for another article.

Lighting kits and decoders. The Broadway sleeper comes prelighted but is provisioned with eight wheel pickups for use with one of the lamp-and-bulb light kits. Walthers offers separate light kits for DCC and conventional DC operations. Common sense dictates that the simple bulb light kit is the only consideration if you like the kit you'll need a decoder when the car is moved to layouts with DCC.

Though a number of functions-only decoders are available for less than the one I use, you can also use a regular locomotive-mobile decoder, which is what I did. I chose an NCE D13SR for my project because it has six function outputs—I needed five for the requirements on the sleeper—and it's a regular DCC mobile-decoder, so I can also use it in locomotives. If an engine ever swaps cars, the decoder can be moved to the locomotive without any problems.

Interior lights. Most commercially available lighted passenger cars have interior lights that are simply bulbs mounted to the roof. Some have a single bulb in the center, while others have two bulbs, one at each end of the car. Some cars have a combination of the two. Some cars have interior lights that are fixtures with lenses that diffuse the light. Others have lights that are simply bulbs mounted to the roof. Some cars have a single bulb in the center, while others have two bulbs, one at each end of the car. Some cars have a combination of the two.

Fig. 1 Wiring diagram. Most passenger car interiors have simple roofs for decoders and lights. Mine started with a simple light bar from a Walthers kit.

Fig. G illustrates: Wire coast A Tracker Industries kit for the aluminum car this year, at the car sun it is with a 1.4mm LED.

Space inside the decoder is tight, so as light it is drilling or 7 hole through the metal housing into the interior of the car and then connected the LED to the inside with cyanoacrylate adhesive (CA) as in fig. H. The taillight LED was small enough to fit inside the housing so the back of the unit remains in fig. A on page 46.

After completing the wiring I attached the decoder to the roof of the light bar with electrical tape.

Programming. Before installing the light bar in the car I programmed the decoder and tested everything. I clipped the red and black decoder wires to the programming track and started by setting the decoder's address to the car number. I then

Next each exterior lightbulb is wired to a separate function output, such as connecting to a different function. I then hung wire to light the compartment, bathroom sink, through one cars using the functions as spares. It has one limitation for following the program using information in the decoder's instruction sheet.

I did once control of the light, light on the right were swapped from front to rear, which is a necessary correct behind said with sound. Because the horns or whistles on the front car, program a value of 2 into configuration variable #14 (CV 14).

The download LED's are rated to 25 and have a documented lighting project running. To change this, I set CV 19 to a value of 128. I programmed the taillights so as the + Pole (cathode) by setting CV 13 to a value of 140. The number was

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Fig. 3. Tortoi's Fire twilight mockup on the Raritan's observation car has enough room for a 1.6mm LED.

calculated using the chart in the decoder manual. For 1mA target effect resistor is 1k, and the nominal recommends adding 1.5k to a 3k resistor using our LED example of 2.5k(ish).

Why you can't read back CVs. You'll be surprised to learn a common one-sentence "DCC Questions" when reading back the value of CV1 in order the decoder is the value of a CV is equal to a current installed. To operate with the decoder sends a short period pulse on the motor. Then only a current drops is detected by the DCC system's programming track complete. Where the passenger car has no motor, you can't read back the CVs.

A programmable LED resistor can be of excellent on the basic loads, the circuit and you control, and I found that I needed a load of about 100mA to be able to successfully read back CVs. A resistor that large would get excessively hot if power were applied on a decoder accessory operation. When reading back CVs and comparison to the applications, I didn't include the resistor.

Installing a mobile decoder in a passenger car or creative lighting is a cool and easy project. And you can apply the same techniques to add realistic lights and interior lamps to your collection cars. Once you've installed lights on a few cars, it's time to add the more lights and switch your trains that aren't fully through the night.

Send your questions about Digital Command Control to DCC Comm, Model Railroader magazine, P.O. Box 1612, Waukesha, WI 53187-1612, or e-mail dccdiscuss@mp.com. We regret we can't answer all the questions we receive.

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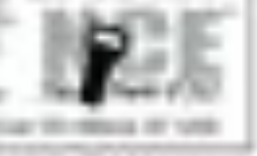

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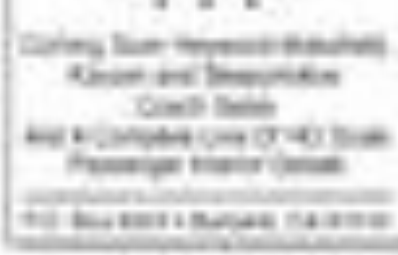

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Kato EMD SD80MAC

By: Ken Thompson

E-R Models Baldwin RF-16 Sharknose Diesel

by Kent Charles

Photos by the author

The end of World War II left the Chesapeake & Ohio Railway (C&O) of Cleveland, Ohio, with a significant surplus fleet of steam locomotives. Many of these were relatively young, having been built during the 1940s. Unfortunately, the railroad's president, Robert R. Young, was a staunch proponent of dieselization. He had already ordered 400 diesels from General Motors' Electro-Motive Division (EMD) and Alco-General Electric (Alco-GE) before the war ended. Young's vision of the future was clear, and he was not about to let a surplus of steam power get in the way of progress.

Between 1945 and 1949, the C&O purchased 400 diesel locomotives, including 100 EMD F3s, 50 Alco-GE PA-1s, 50 Alco-GE PB-1s, and 200 Baldwin DR-6-4-1500 Sharknose units. The Sharknose units were the largest diesel locomotives ever built by Baldwin, and they were the railroad's first road diesels capable of 1,500 horsepower. Baldwin's Sharknose units were also the railroad's first diesels to be equipped with dynamic brakes. Unfortunately, the Sharknose units were not very reliable, and they were retired by the C&O between 1957 and 1960.

Although the Sharknose units were not very successful, they were very distinctive looking locomotives. Their unique appearance has made them popular with model railroaders for many years. Over the years, several companies have produced models of the Sharknose units in various scales. The most recent model to be produced is E-R Models' RF-16 Sharknose diesel. E-R Models is a relatively new company that specializes in producing high-quality brass models of diesel locomotives. The RF-16 is the company's first model of a steam locomotive.

The prototype RF-16 was built by Baldwin in 1948. It was the largest diesel locomotive ever built by Baldwin. It was also the most powerful diesel locomotive ever built by Baldwin. The RF-16 was built for the C&O's Chesapeake Division, which operated between Cleveland, Ohio, and Washington, D.C. The RF-16 was built to haul heavy freight trains over the mountains between Cleveland and Washington. The RF-16 was also built to haul passenger trains between Cleveland and Washington.

The RF-16 was built with a 16-cylinder, 2-cycle, turbocharged engine. The engine was rated at 1,500 horsepower at 800 rpm. The RF-16 was also built with a dynamic brake. The dynamic brake was rated at 1,000 horsepower at 800 rpm. The RF-16 was built with a maximum speed of 70 mph. The RF-16 was built with a weight of 250,000 pounds. The RF-16 was built with a length of 70 feet 6 inches. The RF-16 was built with a width of 10 feet 6 inches. The RF-16 was built with a height of 15 feet 6 inches.

The RF-16 was built with a single cab. The cab was built with a single seat. The cab was built with a single window. The cab was built with a single door. The cab was built with a single step. The cab was built with a single handrail. The cab was built with a single grab iron. The cab was built with a single sand box. The cab was built with a single bell. The cab was built with a single whistle. The cab was built with a single headlight. The cab was built with a single ditch light. The cab was built with a single number board. The cab was built with a single class light. The cab was built with a single road number. The cab was built with a single builder's plate.

The RF-16 was built with a single truck. The truck was built with a single set of wheels. The truck was built with a single set of axles. The truck was built with a single set of journals. The truck was built with a single set of bearings. The truck was built with a single set of springs. The truck was built with a single set of equalizers. The truck was built with a single set of brake shoes. The truck was built with a single set of brake rigging. The truck was built with a single set of brake pipes. The truck was built with a single set of brake hoses. The truck was built with a single set of brake valves. The truck was built with a single set of brake cylinders. The truck was built with a single set of brake reservoirs. The truck was built with a single set of brake gauges. The truck was built with a single set of brake wheels. The truck was built with a single set of brake levers. The truck was built with a single set of brake rods. The truck was built with a single set of brake pins. The truck was built with a single set of brake bushings. The truck was built with a single set of brake springs. The truck was built with a single set of brake shoes. The truck was built with a single set of brake linings. The truck was built with a single set of brake hangers. The truck was built with a single set of brake guides. The truck was built with a single set of brake supports. The truck was built with a single set of brake pins. The truck was built with a single set of brake bushings. The truck was built with a single set of brake springs. The truck was built with a single set of brake shoes. The truck was built with a single set of brake linings. The truck was built with a single set of brake hangers. The truck was built with a single set of brake guides. The truck was built with a single set of brake supports.

The RF-16 was built with a single engine. The engine was built with a single set of cylinders. The engine was built with a single set of pistons. The engine was built with a single set of rings. The engine was built with a single set of bearings. The engine was built with a single set of crankshafts. The engine was built with a single set of camshafts. The engine was built with a single set of valves. The engine was built with a single set of springs. The engine was built with a single set of rockers. The engine was built with a single set of pushrods. The engine was built with a single set of lifters. The engine was built with a single set of guides. The engine was built with a single set of seals. The engine was built with a single set of gaskets. The engine was built with a single set of bolts. The engine was built with a single set of nuts. The engine was built with a single set of washers. The engine was built with a single set of studs. The engine was built with a single set of plugs. The engine was built with a single set of wires. The engine was built with a single set of coils. The engine was built with a single set of distributors. The engine was built with a single set of magnetos. The engine was built with a single set of generators. The engine was built with a single set of alternators. The engine was built with a single set of starters. The engine was built with a single set of batteries. The engine was built with a single set of cables. The engine was built with a single set of switches. The engine was built with a single set of relays. The engine was built with a single set of fuses. The engine was built with a single set of circuit breakers. The engine was built with a single set of meters. The engine was built with a single set of gauges. The engine was built with a single set of indicators. The engine was built with a single set of lights. The engine was built with a single set of bulbs. The engine was built with a single set of lenses. The engine was built with a single set of reflectors. The engine was built with a single set of mirrors. The engine was built with a single set of windows. The engine was built with a single set of doors. The engine was built with a single set of hatches. The engine was built with a single set of covers. The engine was built with a single set of shields. The engine was built with a single set of guards. The engine was built with a single set of rails. The engine was built with a single set of steps. The engine was built with a single set of ladders. The engine was built with a single set of platforms. The engine was built with a single set of walkways. The engine was built with a single set of railings. The engine was built with a single set of handrails. The engine was built with a single set of grab irons. The engine was built with a single set of sand boxes. The engine was built with a single set of bells. The engine was built with a single set of whistles. The engine was built with a single set of headlights. The engine was built with a single set of ditch lights. The engine was built with a single set of number boards. The engine was built with a single set of class lights. The engine was built with a single set of road numbers. The engine was built with a single set of builder's plates.

HO SCALE REVIEW

Atlas ACF 4650 Center Flow® Hopper

Most manufacturers avoid cars or road numbers that are bright on controversy and dig bright on controversy. Atlas has opted to do it a dangerous path in its last several HO Center Flow hoppers. It took me back a little to the days of Bachmann's Spectrum line when I bought every Santa Fe car I could get my hands on. Now I decided not the architect to model cars that actually have the road numbers listed as shown. The cars are more prone to pronounced rivet lines and 4-4-8 plastic pronounced prototypical. The lettering is sharp as a tack — and accurate as it was in the Western Pacific service (Table 1). It took a great deal longer for the prototype. The red and white scheme never re-appear in the cars' eight or so years in service. Considering the relative shape of the cars, it did not a great job. The road numbers were applied in two colors. Except the two in a single color, diagonal stripe, with part numbers for the model completely. Decals at spring on. All. Brand, coupler, body and pair that and was complete and where the numbers are also provided for both A & B each without. I used two and of the small hopper was offered in a neutral gray. There is no economy, conservation in some cars but. This is a good model of a distinctive Bethlehem locomotive. Anyone rendering the cross and water should consider acquiring a set of these engines.

A & Are positive the following Northern A/B car concept as well). Undecorated 1988 Weyerhaeuser boxes, Kaiser Steel 51120713 and 51120718, Weyerhaeuser Gray Bird & Atlas, delectable, 4/41, Cyprus Mines, 1988/1989 gon (1/2/1/18, Beech Aircraft Corporation, 51120717, and 51120719, and Ralph Williamson, 1989/1/24 1/2/1/2 cars. Additional paint schemes are planned this season.

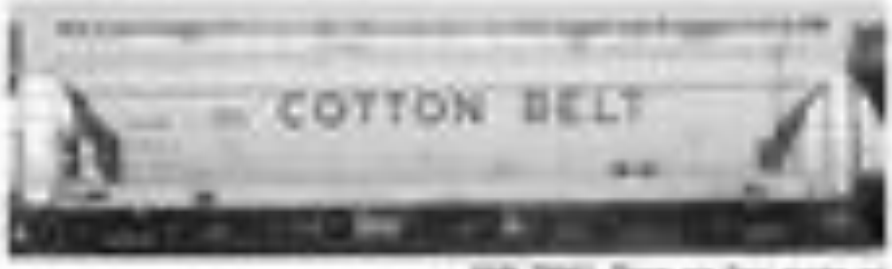
WP 13025. Note how the lettering matches the Atlas model treatment. This car has the Type A roof — with the oval hole and the vapor plate. It has the Type 1 side (step tangent predominant).

ACF# 99108. This car has all of the early features. Stirrups roof supports, side angle stiffener, Type 2 sill, and Type 1 plate forecastle — no "vibs"! This car was built in June 1968 as part of the 49999-49374 series. The car was eventually re-assigned from AHPX. Photographed September 1987.

ACF# 99107 is the only Type 3 sill I examined in my entire facts that right behind the ladder (where it meets the sidesill there is a notch — this is the Type 3 sill. This car has the six 30" hatches and is equipped with gates, grain-only portions. Photographed August 1983.

CSAB 77341. As did most CSAB 40'6"s, this car has grain-a pneumatic portion. Note the horizontal side stiffening angle and only three seams on the side. The car was built in 1968 as part of the CSAB 77200-77699 series. Note the location of the roping plate (further in toward the center than on later cars). Photographed June 19, 1983.

my very center. The sealed, welded door the bottom on door groove but not was shop on the outer metal, a mistake here. The jacket has no Type 2 sidesill reinforced by the groove of the sidesill under the end openings. The Type 3 sill places it in the 1970's type range. Note the Type 3 sill has the notch on the upper part before the ladder (arrow) and how the tell will going all the way to the end — an



side. Hell). There are five seams on the side of this car built in April 1979. The Type 3 plate is still present at this time (changed in 1977). Photographed June 19, 1983.

CSAB 10005. Built in May 1977, this car has the Type 3 sill (note the upper notch in the sill). The Type 4 plate (new "vibs" present) is present on this car. Seven side sheet seams. Photographed October 26, 1983.

UTLX 76874. This end view shows the correct placement of the brake gear and associated piping. Photographed June 3, 1982.

Parts

- Tichy 40' box kit
- Kadee #58 wheels
- Available in gray (#071), USRA weathered gray (#072), USRA yellow body, color*
- Accurail 3-3-8 wagon, detailing as was brought to the kit
- Micro-Trains couplers on each end
- Grey lettering
- Colored with dark coal

Cons

- Fits with Kadee easily
- Many (#71) parts in polystyrene needed above NMRA tolerances

FMCX 40256. Series FMCX 40000-40349 (349 cars). Red oil #6556 paint for green. Many years for chemicals such as this FMC car. Plastic paint build (right). This car has three elongated hatches and gravity outlets like this model. Photographed October 1982.

SP 484963 was built the same year as the UTLX car, but has the Type 4 (of four) dry dust hatch. Three elongated hatches and gravity-processors outlets. Photographed October 3, 1983.

UTLX 5171. Built in October 1980, this car has the Type 5 (of five) oval hatch. This car has the four-piece continuous hatch. Photographed February 6, 1983.

SAFX 179 has an optional catch pin (for vertical upper end stake) (to the center just under the walk). Built in November 1977. Ladder brackets are present. Note the rivethead is a different type than the model. Type 3 roof, Type 4 plate and Type 5a step (rectangular, beside "new-era" underframe). Photographed May 26, 1982.

HO SCALE REVIEW

Kato SD70MAC with Cab-Mounted Headlight

by Rob Sloane

The exposed castings on the rear cowl are molded in yellow and area fit into the grab rails, thus eliminating the need for painting. The small type on the warning placards is readable under magnification. The trip wire will have to be bent upward to keep them from hooking on turnouts and guide crossings.

HO SCALE REVIEW

Life-Like Proto 1000 Alco RS2

by Rich Ficarella

Photos by Randy Lee

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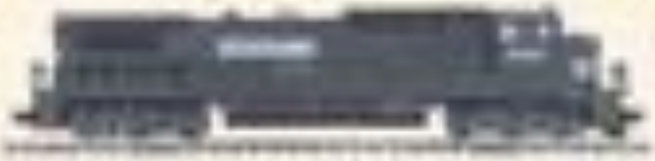

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Early morning logging

by Robert Brown | January 31, 1999

On Milford Sea Logging Ltd.'s Dun Mountain logging show, Robert Brown uses a Canon EOS 1 camera with a 22-70 zoom lens and Fuji Velvia film to capture the early morning activity.

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